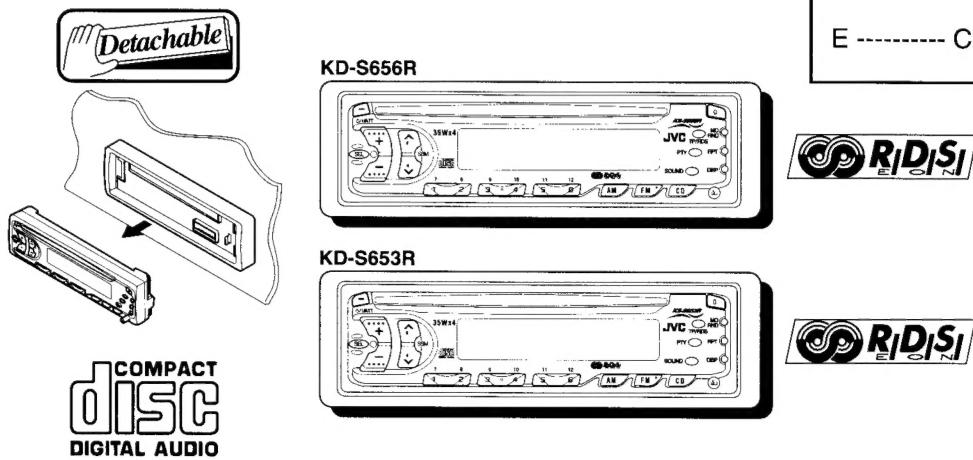


# JVC

# SERVICE MANUAL

CD RECEIVER

## KD-S656R/KD-S653R



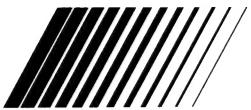
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## Safety Precaution

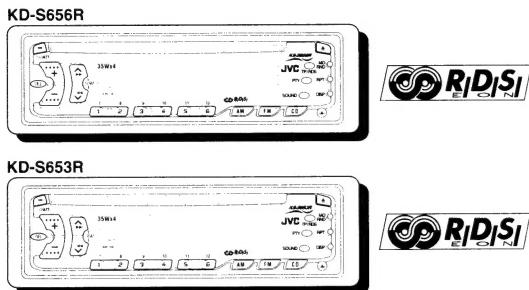
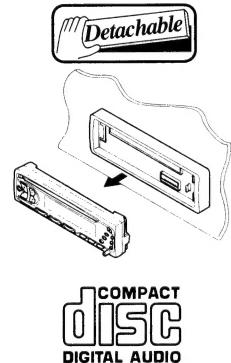
 **CAUTION** Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

 **CAUTION** Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.

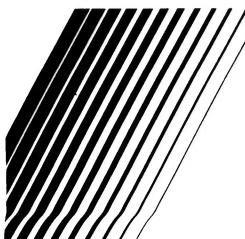


**CD RECEIVER**  
**CD-RECEIVER**  
**RECEPTEUR CD**  
**CD-RECEIVER**

**KD-S656R/S653R**



For installation and connections, refer to the separate manual.  
Für den Einbau und die Anschlüsse siehe das eigenständige Handbuch.  
Pour l'installation et les raccordements, se référer au manuel séparé.  
Bijzonderheden over de installatie en aansluiting van het apparaat vindt u in de desbetreffende handleiding.



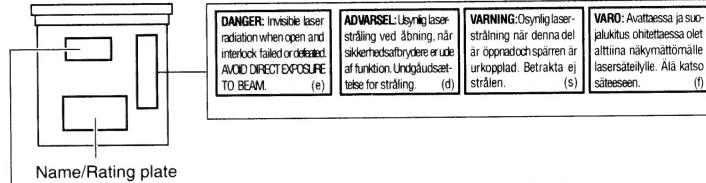
## INSTRUCTIONS

**BEDIENUNGSANLEITUNG**  
**MANUEL D'INSTRUCTIONS**  
**GEBRUIKSAANWIJZING**

ENGLISH  
DEUTSCH  
FRANÇAIS  
NEDERLANDS

### Position And Reproduction Of Labels

Bottom panel of the main unit



**Caution:**  
This product contains a laser component  
of higher laser class than Class 1.

### IMPORTANT FOR LASER PRODUCTS

#### Precautions:

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user-serviceable parts inside. Leave all servicing to qualified service personnel.
4. **CAUTION:** This CD player uses invisible laser radiation and is equipped with safety switches to prevent radiation emission when unloading CDs. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

#### Note:

For security reasons, a numbered ID card is provided with this unit, and the same ID number is imprinted on the unit's chassis. Keep the card in a safe place, as it will help the authorities to identify your unit if stolen.

#### BEFORE USE

- \* For safety....
- Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.
- Stop the car before performing any complicated operations.

#### \*Temperature inside the car....

If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.

Thank you for purchasing a JVC product. Please read all instructions carefully before operation, to ensure your complete understanding and to obtain the best possible performance from the unit.

## CONTENTS

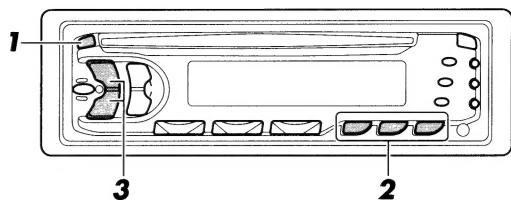
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ENGLISH



## BASIC OPERATIONS



**Note:**  
When you use this unit for the first time, set the built-in clock correctly, see page 23.

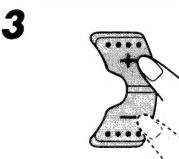


Turn on the power.

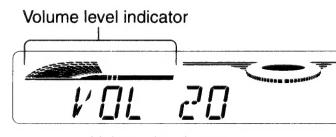


Select the source.

To operate the tuner, see pages 5 – 16.  
To operate the CD player, see pages 17 – 19.



Adjust the volume.



Volume level appears.



Adjust the sound as you want (see pages 20 – 22).

### To drop the volume in a moment

Press **Ø/I/ATT** briefly while listening to any source. "ATT" starts flashing on the display, and the volume level will drop in a moment.

To resume the previous volume level, press the button briefly again.

### To turn off the power

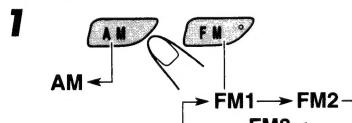
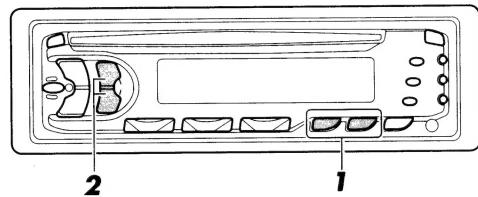
Press and hold **Ø/I/ATT** for more than 1 second.

## RADIO OPERATIONS



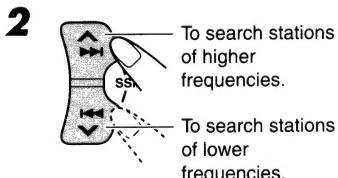
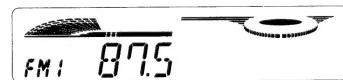
### Listening to the radio

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Select the band (FM1, FM2, FM3 or AM).

You can select any one of FM1, FM2, and FM3 to listen to an FM station.



Start searching a station.  
When a station is received, searching stops.



To stop searching before a station is received, press the same button you have pressed for searching.

#### To tune in a particular frequency without searching:

1 Select the band (FM or AM).

Press FM or AM.

2 Press and hold  $\wedge \blacktriangleright$  or  $\blacktriangleleft \vee$  until "M" starts flashing on the display.

Now you can manually change the frequency while "M" is flashing.

3 Press  $\wedge \blacktriangleright$  or  $\blacktriangleleft \vee$  repeatedly until the frequency you want is reached.

- If you hold down the button, the frequency keeps changing (in 50 kHz intervals for FM and 9kHz intervals for AM-MW/LW) until you release the button.



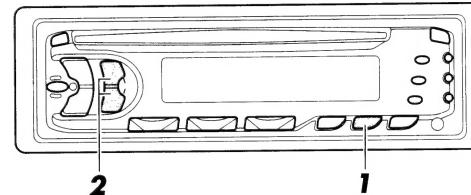
### Storing stations in memory

You can use one of the following two methods to store broadcasting stations in memory.

- Automatic preset of FM stations:SSM (Strong-station Sequential Memory)
- Manual preset of both FM and AM stations

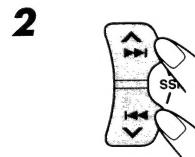
#### FM station automatic preset:SSM

You can preset 6 local FM stations in each FM band (FM1, FM2, and FM3).



Select the FM band number (FM1, FM2 or FM3) you want to store FM stations into.

$\rightarrow$  FM1  $\rightarrow$  FM2  $\rightarrow$  FM3



Press and hold both buttons for more than 2 seconds.



"SSM" appears, then disappears when automatic preset is over.

Local FM stations with the strongest signals are searched and stored automatically in the band number you have selected (FM1, FM2 or FM3). These stations are preset in the number buttons — No. 1 (lowest frequency) to No. 6 (highest frequency).

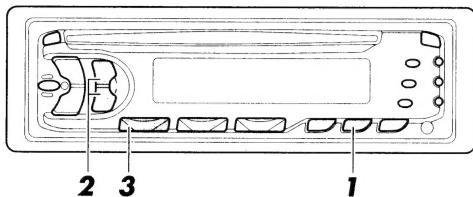
When automatic preset is over, the station stored in number button 1 will be automatically tuned in.

ENGLISH

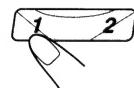
**Manual preset**

You can preset up to 6 stations in each band (FM1, FM2, FM3 and AM) manually.

EXAMPLE: Storing an FM station of 88.3 MHz into the preset number 1 of the FM1 band

**1**

Select the FM1 band.

**2**Tune into a station of 88.3 MHz.  
See page 5 to tune into a station.**3**

Press and hold the button for more than 2 seconds.



"P1" flashes for a few seconds.

**4**

Repeat the above procedure to store other stations into other preset numbers.

**Notes:**

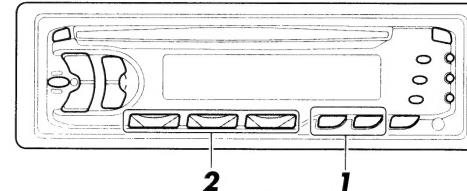
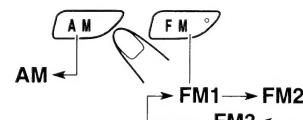
- A previously preset station is erased when a new station is stored in the same preset number.
- Preset stations are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the stations again.

7

**Tuning into a preset station**

You can easily tune into a preset station.

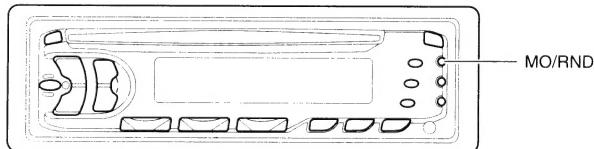
Remember that you must store stations first. If you have not stored them yet, see pages 6 and 7.

**1**

Select the band (FM1, FM2, FM3 or AM) you want.

**2**

Select the number (1 – 6) for the preset station you want.

**When an FM stereo broadcast is hard to receive**

Press MO/RND (Mono/Random) while listening to an FM stereo broadcast.

The "MO" (Mono) indicator lights up on the display. The sound you hear becomes monaural but reception will be improved.

Lights up when receiving an FM broadcast in stereo.



To restore the stereo effect, press the same button again.

8

# RDS OPERATIONS



## What you can do with RDS EON

RDS (Radio Data System) allows FM stations to send an additional signal along with their regular programme signals. For example, the stations send their station names, as well as information about what type of programme they broadcast, such as sports or music, etc.

Another advantage of RDS function is called "EON (Enhanced Other Networks)." The EON indicator lights up while receiving an FM station with the EON data. By using the EON data sent from a station, you can tune into a different station of a different network broadcasting your favorite programme or traffic announcement while listening to another programme or to another source such as CD.

By receiving the RDS signals, this unit can do the following:

- Tracing the same programme automatically (Network-Tracking Reception)
- Standby Reception of TA (Traffic Announcement) or your favorite programme
- PTY (Programme Type) search
- TA (Traffic Announcement) search
- And some other functions

ENGLISH

## Tracing the same programme automatically (Network-Tracking Reception)

When driving in an area where FM reception is not good, the tuner built in this unit automatically tunes in another RDS station, broadcasting the same programme with stronger signals. So, you can continue to listen to the same programme in its finest reception, no matter where you drive. (See the illustration on the next page.)

Two types of the RDS signals are used to make Network-Tracking Reception work correctly — PI (Programme Identification) and AF (Alternative Frequency) data.

Without receiving these data correctly from the RDS station you are listening to, Network-Tracking Reception will not operate.



**To use Network-Tracking Reception,** Press and hold TP/RDS (Traffic Programme/Radio Data System) for more than 1 second. Each time you press and hold the button, Network-Tracking Reception modes change as follows:

→ Mode 1 → Mode 2 → Mode 3



### Mode 1 (AF: on / REG: off)

Network-Tracking is activated with Regionalization set to "off." Switches to another station within the same network when the receiving signals from the current station become weak.

#### Note:

*In this mode, the programme may differ from the one currently received.*

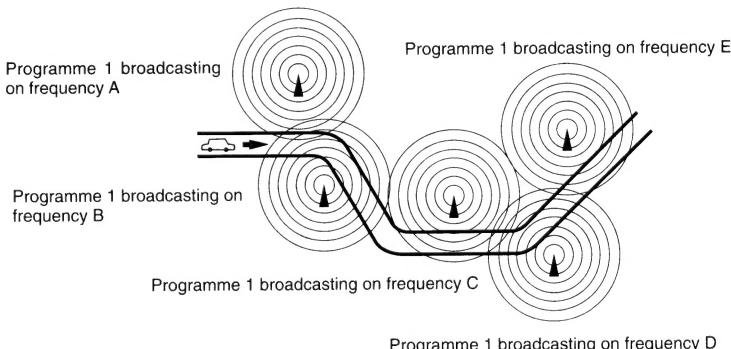
### Mode 2 (AF: on / REG: on)

Network-Tracking is activated with Regionalization set to "on." Switches to another station, within the same network, broadcasting the same programme when the receiving signals from the current station become weak.

### Mode 3 (AF: off / REG: off)

Network-Tracking is deactivated.

The same programme can be received on different frequencies.





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## Using Standby Reception

Standby Reception allows the unit to switch temporarily to your favorite programme (PTY: Programme Type) and Traffic Announcement (TA) from the current source (another FM station and CD).

### Note:

Standby Reception will not work if you are listening to an AM station.

## TA Standby Reception



- When you press TP/RDS while listening to an FM station, the TP indicator is lit during reception of a TP (Traffic Programme) station and the TA standby mode is engaged.

### Note:

When the station being received is not a TP station, the TP indicator flashes. Press  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangledown$  to engage the TA standby mode. "SEARCH" appears on the display, and TP station search starts. When a TP station is tuned in, the TP indicator is lit.

- If you are listening to a CD, and wish to listen to a TP station, press TP/RDS to enter the TA standby mode. (The TP indicator lights up.)

If a traffic programme starts broadcasting while the TA standby mode is active, "TRAFFIC" appears and the playback source changes to the FM band. The volume increases to the preset TA volume level and the traffic programme can be heard.

To deactivate the TA standby mode, press TP/RDS again.

## PTY Standby Reception



- When you press PTY while listening to an FM station, the PTY indicator is lit during reception of a PTY station and the PTY standby mode is engaged. The selected PTY name stored on page 12 flashes for 5 seconds.

### Note:

When the station being received is not a PTY station, the PTY indicator flashes. Press  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangledown$  to engage the PTY standby mode. "SEARCH" appears on the display, and PTY station search starts. When a PTY station is tuned in, the PTY indicator is lit.

- If you are listening to a CD, and wish to listen to a selected PTY broadcast, press PTY to enter the PTY standby mode. (The PTY indicator lights up.)

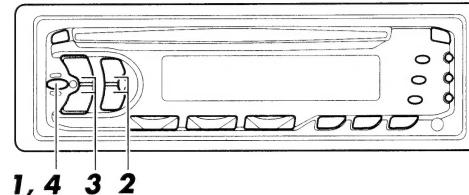
If the selected PTY programme starts broadcasting while the PTY standby mode is active, the selected PTY name appears and the playback source changes to the FM band. The selected PTY programme can then be heard.

To deactivate the PTY standby mode, press PTY again.



## Selecting Your Favorite Programme for PTY Standby Reception

You can select your favorite programme for PTY Standby Reception to store in memory. When shipped from the factory, "NEWS" is stored as the programme type for PTY Standby Reception.

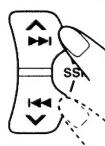


1



Press and hold SEL for more than 2 seconds to call up the general settings mode (see page 25).

2



Select "PTY STBY"(Standby) if not shown on the display.

3



Select one of twenty-nine PTY codes. (See the table on page 16.)  
Selected code name appears on the display and is stored into memory.

4



Finish setting.

## Searching Your Favorite Programme

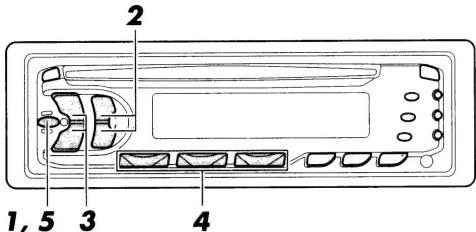
You can search one of your 6 favorite programme types stored in memory. When shipped from the factory, the following 6 programme types have been stored in the number buttons (1 to 6).

To store your favorite programme types, see page 13.

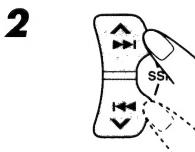
To search your favorite programme, see page 14.

1	2	3	4	5	6
POP M	ROCK M	EASY M	CLASSICS	AFFAIRS	VARIED

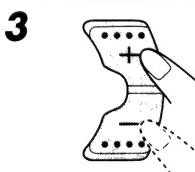
### To store your favorite programme types



Press and hold SEL for more than 2 seconds to call up the general settings mode (see page 25).



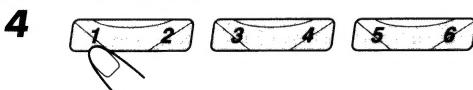
Select "PTY SRCH"(Search) if not shown on the display.



Select one of twenty-nine PTY codes. (See the table on page 16.)

Selected code name appears on the display.

- If the code already stored in memory is selected, it will flash on the display.



Press and hold the number button for more than 2 seconds to store the PTY code selected into the preset number you want.

The PTY code starts flashing.

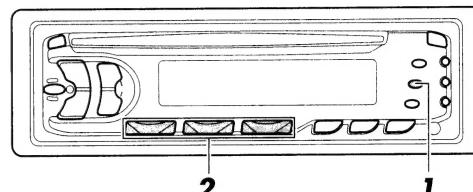


Finish setting.

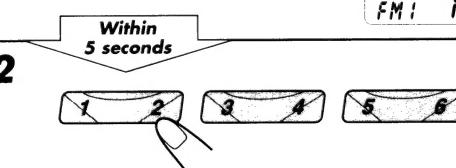
ENGLISH



### To search your favorite programme type



Press and hold PTY for more than 1 second while listening to an FM station.  
The last selected PTY code appears.



Select one of the PTY codes stored in the preset number buttons (1 to 6).



Ex. When "CLASSICS" is stored in the preset number button 2.

PTY search for your favorite programme starts after 5 seconds.

- If there is a station broadcasting a programme of the same PTY code you have selected, that station is tuned in.
- If there is no station broadcasting a programme of the same PTY code you have selected, the station will not change.

#### Note:

*In some areas, the PTY search will not work correctly.*



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## Other convenient RDS functions

### Automatic selection of the station when using the number buttons

Usually when you press the number button, the preset station is tuned in. However, when the preset station is an RDS station, something different will happen. If the signals from that preset station are not sufficient for good reception, this unit starts searching another station broadcasting the same programme as the original preset station is broadcasting, then if any station broadcasting the same programme is found, the station will be tuned in.

### Changing the display mode while listening to an FM station

You can change the initial indication on the display to station frequency, station name (PS), or clock time while listening to an FM RDS station.

- See also "Changing the general settings" on page 25.

1. Press and hold SEL (select) for more than 2 seconds to call up the general settings mode.
2. Select "DISPMODE" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangledown$ .
3. Set to the desired indication (station frequency, clock time, or station name) with the level control buttons (+,-).

**Note:**

*By pressing DISP, you can also change the display while listening to an FM RDS station. Each time you press the button, the display changes to show the following:*

→ Station name → Frequency → PTY (Programme type) → Clock time

*\* The display returns to the initially preset mode after a short while.*

### Setting the TA volume level

You can preset the volume level for TA Standby Reception. When a traffic programme is received, the volume level automatically changes to the preset level.

- See also "Changing the general settings" on page 25.

1. Press and hold SEL (select) for more than 2 seconds to call up the general settings mode.
2. Select "TA VOL" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangledown$ .
3. Set to the desired volume level with the level control buttons (+,-).



### Automatic clock adjustment

When shipped from the factory, the clock built in this unit is set to be readjusted automatically using the CT (Clock Time) data in the RDS signal.

If you do not want to use automatic clock adjustment, follow the procedure below.

- See also "Changing the general settings" on page 25.

1. Press and hold SEL (select) for more than 2 seconds to call up the general settings mode.
2. Select "AUTO ADJ" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangledown$ .
3. Select "ADJ OFF" with the level control buttons (+,-).

Now automatic clock adjustment is canceled.

To reactivate clock adjustment, repeat the same procedure and select "ADJ ON" in step 3 with the level control buttons (+,-).

**Note:**

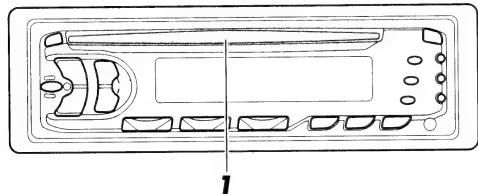
*It takes about 2 minutes to adjust the time using the CT data. So, you must tune to the station for more than 2 minutes continuously; otherwise, the clock time will not be adjusted.*

### PTY codes

NEWS:	News	SOCIAL:	Programmes on social activities
AFFAIRS:	Topical programmes expanding on current news or affairs	RELIGION:	Programmes dealing with any aspect of belief or faith, or the nature of existence or ethics
INFO:	Programmes which impart advice on a wide variety of topics	PHONE IN:	Programmes where people can express their views either by phone or in a public forum
SPORT:	Sport events	TRAVEL:	Programmes about travel destinations, package tours, and travel ideas and opportunities
EDUCATE:	Educational programmes	LEISURE:	Programmes concerned with recreational activities such as gardening, cooking, fishing, etc.
DRAMA:	Radio plays	JAZZ:	Jazz music
CULTURE:	Programmes on national or regional culture	COUNTRY:	Country music
SCIENCE:	Programmes on natural science and technology	NATION M:	Current popular music from another nation or region, in that country's language
VARIED:	Other programmes like comedies or ceremonies	OLDIES:	Classic pop music
POP M:	Pop music	FOLK M:	Folk music
ROCK M:	Rock music	DOCUMENT:	Programmes dealing with factual matters, presented in an investigative style
EASY M:	Easy-listening music		
LIGHT M:	Light music		
CLASSICS:	Classical music		
OTHER M:	Other music		
WEATHER:	Weather information		
FINANCE:	Reports on commerce, trading, the Stock Market, etc.		
CHILDREN:	Entertainment programmes for children		

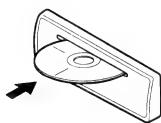
## CD OPERATIONS

### Playing a CD

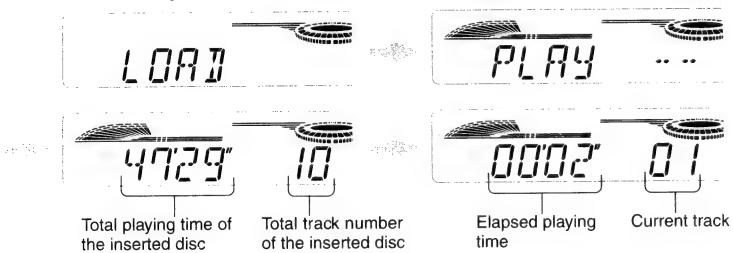


ENGLISH

1



Insert a disc into the loading slot.  
The unit turns on, draws a CD and starts playback automatically.



#### Note on One-Touch Operation:

When a CD is already in the loading slot, pressing CD turns on the unit and starts playback automatically.

#### CAUTION on Volume Setting

CDs produce very little noise compared with other sources. If the volume level is adjusted for the tuner, for example, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before playing a CD and adjust it as required during playback.

### To stop play and eject the CD

Press ▲.

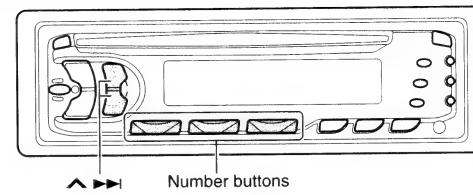
CD play stops and the CD automatically ejects from the loading slot.

If you change the source to AM or FM, the CD play also stops (without ejecting the CD this time).

- If the ejected disc is not removed for about 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (CD play will not start this time.)
- You can eject the CD even when the unit is turned off.



### Locating a track or a particular portion on a CD



Number buttons

#### To fast forward or reverse the track

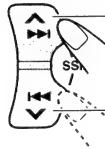


Press and hold ▲ ►►, while playing a CD, to fast forward the track.



Press and hold ▲ ◀◀, while playing a CD, to reverse the track.

#### To go to the next track or the previous track

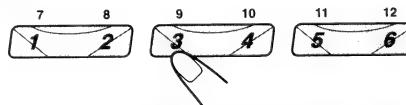


Press ▲ ►► briefly, while playing a CD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next track is located and played back.



Press ▲ ◀◀ briefly, while playing a CD, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous track is located and played back.

#### To go to a particular track directly

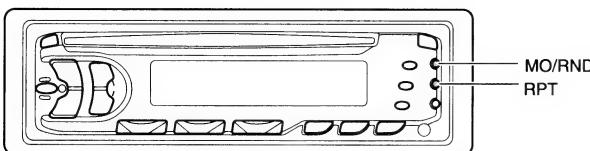


Press the number button corresponding to the track number to start its playback.

- To select a track number from 1 – 6:  
Press 1 (7) – 6 (12) briefly.
- To select a track number from 7 – 12:  
Press and hold 1 (7) – 6 (12) for more than 1 second.

ENGLISH

## Selecting CD playback modes



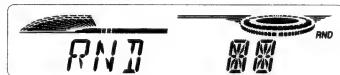
### To play back tracks at random (Random Play)

You can play back all tracks on the CD at random.



Each time you press MO/RND (Mono/Random) while playing a CD, CD random play mode turns on and off alternatively.

When the random mode is turned on, the RND indicator lights up on the display and a track randomly selected starts playing.



### To play back tracks repeatedly (Repeat Play)

You can play back the current track repeatedly.



Each time you press RPT (Repeat) while playing a CD, CD repeat play mode turns on and off alternatively.

When the repeat mode is turned on, the RPT indicator lights up on the display.



Track number of the currently playing track

## Prohibiting CD ejection

You can prohibit the CD ejection and can "lock" a CD in the loading slot.

### Press and hold CD and ▲ for more than 2 seconds.

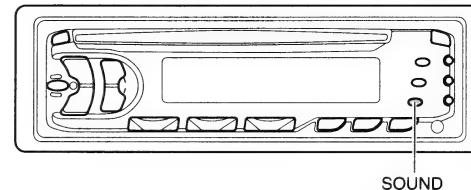
"EJECT" flashes on the display for about 5 seconds, and the CD is "locked."

**To cancel the prohibition and "unlock" the CD,** press and hold CD and ▲ for more than 2 seconds again. "EJECT" appears on the display, and the CD ejects from the loading slot.

## SOUND ADJUSTMENTS

### Selecting preset sound modes

You can select a preset sound adjustment suitable to the music genre:



Each time you press SOUND, the sound mode changes as follows.



→ SCM OFF → BEAT → SOFT → POP

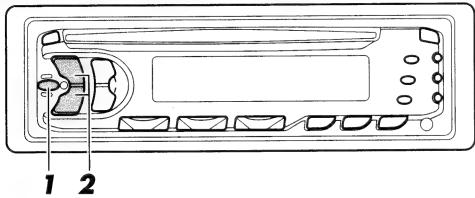
Indication	For:	Preset values		
		Bass	Treble	Loudness
SCM OFF	(Flat sound)	00	00	On
BEAT	Rock or disco music	+2	00	On
SOFT	Quiet background music	+1	-3	Off
POP	Light music	+4	+1	Off

### Notes:

- You can adjust the preset sound mode to your preference, and store it in memory. If you want to adjust and store your original sound mode, see "Storing your own sound adjustments" on page 22.
- To adjust only the bass and treble reinforcement levels to your preference, see "Adjusting the sound" on page 21.

## Adjusting the sound

You can adjust the sound characteristics to your preference.



1



Select the item you want to adjust.

→ BAS → TRE → FAD → BAL → LOUD → VOL →

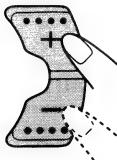
Indication	To do:	Range
BAS (Bass)	Adjust the bass.	-6 (min.) — +6 (max.)
TRE (Treble)	Adjust the treble.	-6 (min.) — +6 (max.)
FAD (Fader)*	Adjust the front and rear speaker balance.	R6 (rear only) — F6 (front only)
BAL (Balance)	Adjust the left and right speaker balance.	L6 (left only) — R6 (right only)
LOUD (Loudness)	Boost low and high frequencies to produce a well-balanced sound at low volume level.	ON — OFF
VOL (Volume)	Adjust the volume.	00 (min.) — 50 (max.)

**Note:**

\* If you are using a two-speaker system, set the fader level to "00" (centre).

**Within 5 seconds**

2



Adjust the level.

Press the + button to turn on the loudness function, and the - button to turn it off.

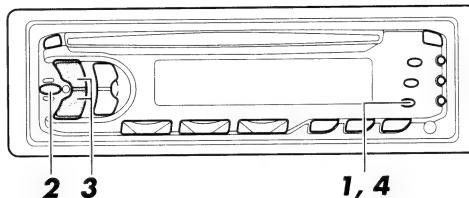
**Note:**

Normally the + and - buttons work as the volume control buttons. So you do not have to select "VOL" to adjust the volume level.



## Storing your own sound adjustments

You can adjust the sound modes (BEAT, SOFT, POP; see page 20) to your preference and store your own adjustments in memory.



1



Call up the sound mode you want to adjust. See page 20 for details.

2



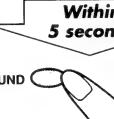
Select "BAS" (Bass), "TRE" (Treble) or "LOUD" (Loudness).

3



Adjust the bass or treble level or turn the loudness function ON/OFF. See page 21 for details.

4



Press and hold the button until the sound mode you have selected in step 1 flashes on the display. Your setting is stored in memory.

5

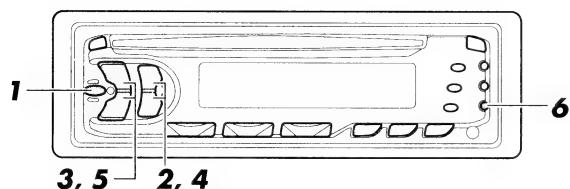
Repeat the same procedure to store other settings.

### To reset to the factory settings

Repeat the same procedure and reassign the preset values listed in the table on page 20.

## OTHER MAIN FUNCTIONS

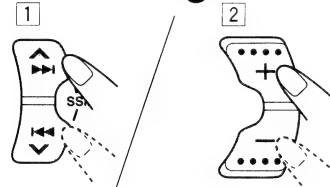
### Setting the clock



ENGLISH

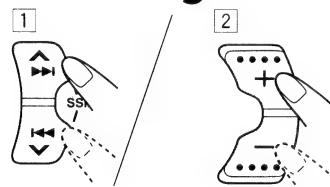
**1**

Press and hold SEL for more than 2 seconds to call up the general settings mode.

**2****3**

Set the hour.

- 1** Select "CLOCK H" if not shown on the display.
- 2** Adjust the hour.

**4****5**

Set the minute.

- 1** Select "CLOCK M."
- 2** Adjust the minute.

**6**

Start the clock.



### To check the current clock time

Press DISP. Each time you press the button, indications change as follows:

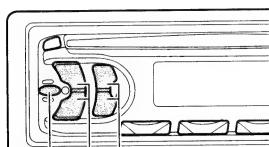
	During tuner operation: <b>Clock ↔ Frequency</b>
	<b>Note:</b> <i>For the indication change during RDS operation, see page 15.</i>
	During CD operation: <b>Clock ↔ Elapsed playing time</b>

**To check the current clock time while the unit is turned off**, press DISP.

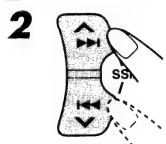
The power turns on, the clock time is shown for 5 seconds, then the power turns off.

## Changing the general settings

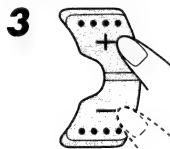
You can change the setting of the items listed below.



1 Press and hold SEL for more than 2 seconds to set the general setting mode.



2 Select each mode.



3 Set the desired mode.



		Factory-preset	See page
CLOCK H	Hour adjustment	Back	Advance
CLOCK M	Minute adjustment	Back	Advance
24H/12H	24/12-hour time display	12H	24H
AUTO ADJ	Automatic setting of the clock	ADJ OFF	ADJ ON
DISPMODE	Display mode	PS NAME FREQ CLOCK	15
PTY STBY	PTY standby	29 programme types (See page 16.)	11-12
PTY SRCH	PTY search	See page 12.	13-14
TR VOL	Traffic announcement volume	VOL (00-50)	VOL (20)
			11, 15

• Press SEL when the setting is complete.



## Detaching the control panel

You can detach the control panel when leaving the car.

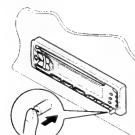
When detaching or attaching the control panel, be careful not to damage the connectors on the back of the control panel and on the panel holder.

### How to detach the control panel

Before detaching the control panel, be sure to turn off the power.

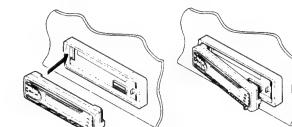


1 Unlock the control panel.

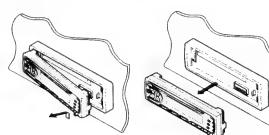


### How to attach the control panel

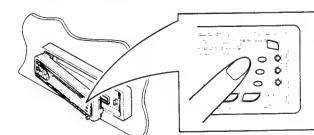
1 Insert the left side of the control panel into the groove on the panel holder.



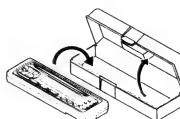
2 Lift and pull the control panel out of the unit.



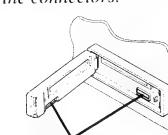
2 Press the right side of the control panel to fix it to the panel holder.



3 Put the detached control panel into the provided case.



**Note on cleaning the connectors:**  
If you frequently detach the control panel, the connectors will deteriorate.  
To minimize this possibility, periodically wipe the connectors with a cotton swab or cloth moistened with alcohol, being careful not to damage the connectors.



Connectors

# MAINTENANCE

## Handling CDs

This unit has been designed only to reproduce the CDs bearing the  mark. Other discs cannot be played back.

ENGLISH

### How to handle CDs

When removing a CD from its case, press down the centre holder of the case and lift the CD out, holding it by the edges.

- Always hold the CD by the edges. Do not touch its recording surface.



When storing a CD into its case, gently insert the CD around the centre holder (with the printed surface facing up).

- Make sure to store CDs into the cases after use.



### To keep CDs clean

A dirty CD may not play correctly. If a CD becomes dirty, wipe it with a soft cloth in a straight line from centre to edge.



### To play new CDs

New CDs may have some rough spots around the inner and outer edges. If such a CD is used, this unit may reject the CD.

To remove these rough spots, rub the edges with a pencil or ball-point pen, etc.



### Moisture condensation

Moisture may condense on the lens inside the CD player in the following cases:

- After starting the heater in the car.
- If it becomes very humid inside the car.

Should this occur, the CD player may malfunction. In this case, eject the CD and leave the unit turned on for a few hours until the moisture evaporates.

#### CAUTIONS:

- Do not insert 8cm (3 3/16") CDs (single CDs) into the loading slot. (Such CDs cannot be ejected.)
- Do not insert any CD of unusual shape - like a heart or flower; otherwise, it will cause a malfunction.
- Do not expose CDs to direct sunlight or any heat source or place them in a place subject to high temperature and humidity. Do not leave them in a car.
- Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzine, etc.) to clean CDs.

#### About mistracking:

Mistracking may result from driving on extremely rough roads. This does not damage the unit and the CD, but will be annoying.

We recommend that you stop CD play while driving on such rough roads.

# ?? TROUBLESHOOTING

What appears to be trouble is not always serious. Check the following points before calling a service centre.

Symptoms	Causes	Remedies
• CD cannot be played back.	CD is inserted upside down.	Insert the CD correctly.
• CD sound is sometimes interrupted.	You are driving on rough roads.	Stop CD play while driving on rough roads.
	CD is scratched.	Change the CD.
	Connections are incorrect.	Check the cords and connections.
• "NO DISC" appears on the display.	No CD is in the loading slot (or in the magazine).	Insert CD.
	CD is inserted incorrectly.	Insert it correctly.
• Sound cannot be heard from the speakers.	The volume control is turned to the minimum level.	Adjust it to the optimum level.
	Connections are incorrect.	Check the cords and connections.
• SSM (Strong-station Sequential Memory) automatic preset does not work.	Signals are too weak.	Store stations manually.
• Static noise while listening to the radio.	The antenna is not connected firmly.	Connect the antenna firmly.
• CD can be neither played back nor ejected.	The CD player may function incorrectly.	Press $\phi$ /I/ATT and $\Delta$ at the same time for more than 2 seconds. Be careful not to drop CD when it is ejected.
• The unit does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc	Press $\phi$ /I/ATT and SEL at the same time for more than 2 seconds to reset the unit. (The clock setting and preset stations stored in memory are erased.)

## SPECIFICATIONS

### AUDIO AMPLIFIER SECTION

#### Maximum Power Output

Front: 35 watts per channel

Rear: 35 watts per channel

#### Continuous Power Output (RMS)

Front: 15 watts per channel into 4 Ω, 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.

Rear: 15 watts per channel into 4 Ω, 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.

#### Load Impedance: 4 Ω (4 to 8 Ω allowance)

#### Tone Control Range

Bass: ±10 dB at 100 Hz

Treble: ±10 dB at 10 kHz

#### Frequency Response: 40 to 20,000 Hz

#### Signal-to-Noise Ratio: 70 dB

### TUNER SECTION

#### Frequency Range

FM: 87.5 to 108.0 MHz

AM: (MW) 522 to 1,620 kHz

(LW) 144 to 279 kHz

#### [FM Tuner]

Usable Sensitivity: 11.3 dBf (1.0 µV/75 Ω)

50 dB Quieting Sensitivity:

16.3 dBf (1.8 µV/75 Ω)

Alternate Channel Selectivity (400 kHz):

65 dB

Frequency Response: 40 to 15,000 Hz

Stereo Separation: 30 dB

Capture Ratio: 1.5 dB

#### [MW Tuner]

Sensitivity: 20 µV

Selectivity: 35 dB

#### [LW Tuner]

Sensitivity: 50 µV

### CD PLAYER SECTION

#### Type: Compact disc player

Signal Detection System: Non-contact optical pickup (semiconductor laser)

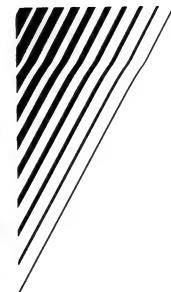
Number of channels: 2 channels (stereo)

Frequency Response: 5 to 20,000 Hz

Dynamic Range: 96 dB

Signal-to-Noise Ratio: 98 dB

Wow and Flutter: Less than measurable limit



### GENERAL

#### Power Requirement

Operating Voltage: DC 14.4 volts (11 to 16 volts allowance)

Grounding System: Negative ground

Allowable working temperature:

0°C to +40°C

Dimensions (W x H x D)

Installation Size: 182 x 52 x 150 mm

Panel Size: 188 x 58 x 14 mm

Mass: 1.3 kg (2.9 lbs) (excluding accessories)

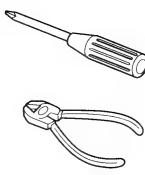
*Design and specifications subject to change without notice.*





**KD-S656R  
KD-S653R**  
**Installation/Connection Manual**  
**Einbau/Anschlußanleitung**  
**Manuel d'installation/raccordement**

LV30756-001A  
[E]



1198MNMDWJEIN  
EN, GE, FR

**ENGLISH**

- This unit is designed to operate only on 12 volts DC, NEGATIVE ground electrical systems.

**INSTALLATION  
(IN-DASH MOUNTING)**

- The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC IN-CAR ENTERTAINMENT dealer or a company supplying kits.

- Before mounting:** Press **▲** (Control Panel Release button) to detach the control panel.
- Remove the trim plate.
- Remove the sleeve after disengaging the sleeve locks.
  - Stand the unit.
  - Note:** When you stand the unit, be careful not to damage the fuse on the rear.
  - Insert the 2 handles between the unit and the sleeve, as illustrated, to disengage the sleeve locks.
  - Remove the sleeve.
  - Note:** Be sure to keep the handles for future use after installing the unit.
- Install the sleeve into the dashboard.
  - After the sleeve is correctly installed in the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as illustrated.
- Fix the mounting bolt to the rear of the unit's body and place the rubber cushion over the end of the bolt.
- Do the required electrical connections explained on the back of this instructions.
- Slide the unit into the sleeve until it is locked.
- Attach the trim plate.
- Attach the control panel.

**DEUTSCH**

- Dieses Gerät ist nur für einen Betrieb in elektrischen Anlagen mit 12 V Gleichstrom und (-) Erdung ausgelegt.

**EINBAU  
(IM ARMATURENBRETT)**

- Die folgende Abbildung zeigt einen typischen Einbau. Dennoch müssen Sie entsprechend Ihrem jeweiligen Auto Anpassungen vornehmen. Bei irgendwelchen Fragen oder wenn Sie Informationen hinsichtlich des Einbausatzes brauchen, wenden Sie sich an Ihren JVC Autoradiodealer oder ein Unternehmen das diese Einbausätze vertreibt.

- Vor dem Einbau:** **▲** (Schalttafel-Freigabetafel) zum Lösen der Schalttafel drücken.
- Den Zierrahmen herausnehmen.
- Die Schutzhüle nach dem Entriegeln der Schutzhüllensperren abnehmen.
  - Das Gerät aufstellen.
  - Hinweis:** Beim Aufstellen des Geräts darauf achten, daß die Sicherung auf der Rückseite nicht beschädigt wird.
  - Die beiden Griffe zwischen dem Gerät und der Schutzhüle wie abgebildet einstecken und die Schutzhüllensperren entriegeln.
  - Die Schutzhüle entfernen.
  - Hinweis:** Sicherstellen, daß die Griffe für künftigen Gebrauch nach dem Einbau des Geräts aufbewahrt werden.
- Die Schutzhüle im Armaturenbrett einbauen.
  - Nach dem korrekten Einbau der Schutzhüle im Armaturenbrett, die entsprechenden Riegel umknicken, um die Schutzhüle an ihrem Platz zu sichern, siehe Abbildung.
- Die Befestigungsschraube an der Rückseite des Gerätekörpers befestigen und das Ende der Schraube mit einem Gummipuffer abdecken.
- Die elektrischen Verbindungen wie umseitig in dieser Anleitung erklärt ausführen.
- Das Gerät in die Schutzhüle schieben, bis es einrastet.
- Den Zierrahmen anbringen.
- Die Schalttafel anbringen.

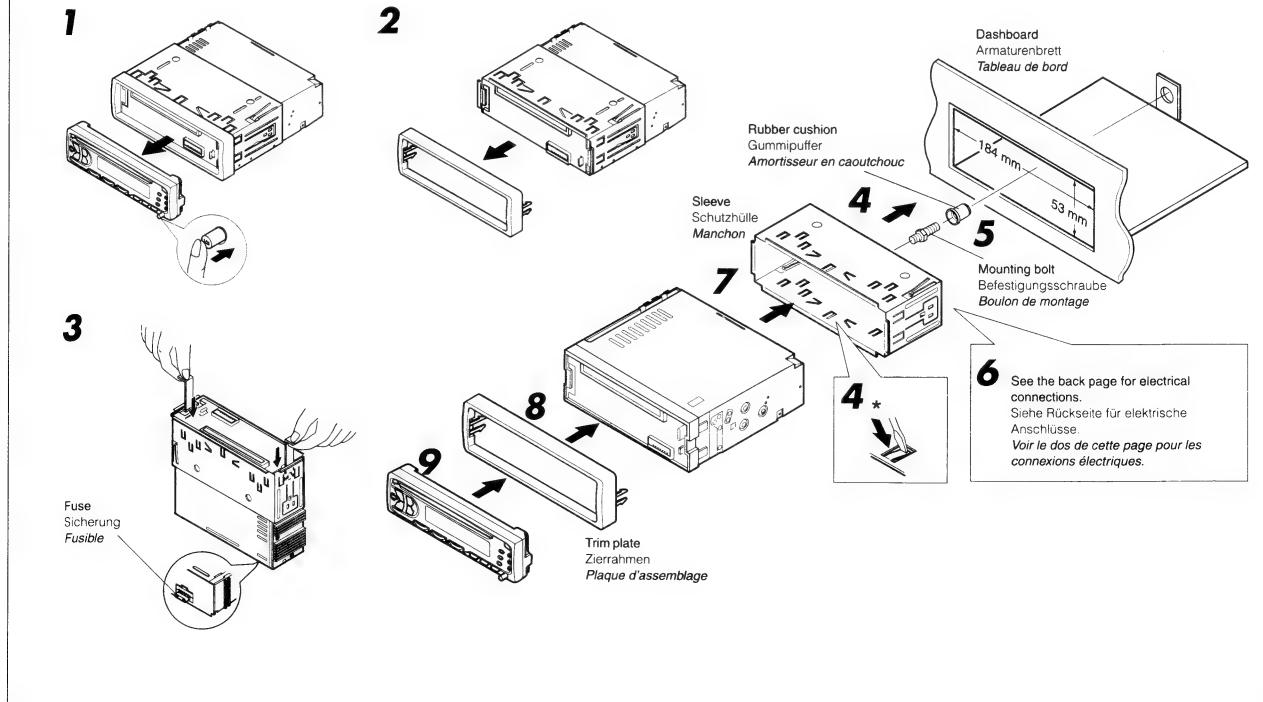
**FRANÇAIS**

- Cet appareil est conçu pour fonctionner sur des sources de courant continu de 12 volts à masse NEGATIVE seulement.

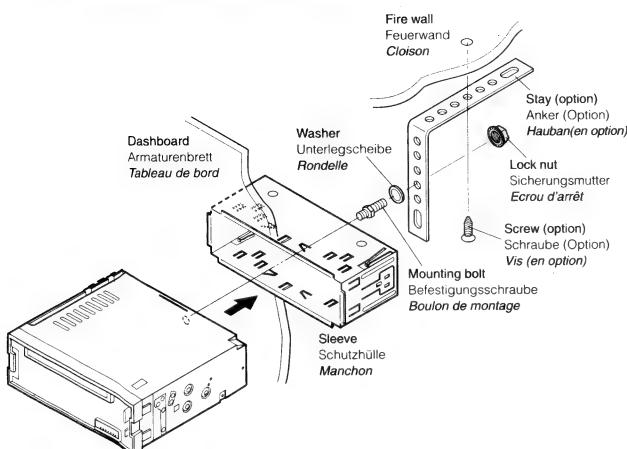
**INSTALLATION  
(MONTAGE DANS LE TABLEAU DE BORD)**

- L'illustration suivante est un exemple d'installation typique. Cependant, vous devez faire les ajustements correspondant à votre voiture particulière. Si vous avez des questions ou avez besoin d'information sur des kits d'installation, consulter votre revendeur d'autoradios JVC ou une compagnie d'approvisionnement.

- Avant le montage:** Appuyer sur **▲** (touche de libération du panneau de commande) pour détacher le panneau de commande.
- Retirer la plaque d'assemblage.
- Libérer les verrous du manchon et retirer le manchon.
  - Poser l'appareil à la verticale.
  - Remarque:** Lorsque vous mettez l'appareil à la verticale, faire attention de ne pas endommager le fusible situé sur le fond.
  - Insérer les 2 poignées entre l'appareil et le manchon comme indiqué pour désengagé les verrous de manchon.
  - Retirer le manchon.
  - Remarque:** S'assurer de garder les poignées pour une utilisation ultérieure, après l'installation de l'appareil.
- Installer le manchon dans le tableau de bord.
  - Après installation correcte du manchon dans le tableau de bord, plier les bonnes pattes pour maintenir fermement le manchon en place, comme montré.
- Monter le boulon de montage sur l'arrière du corps de l'appareil puis passer l'amortisseur en caoutchouc sur l'extrémité du boulon.
- Réaliser les connexions électriques expliquées au dos de cette page.
- Faire glisser l'appareil dans le manchon jusqu'à ce qu'il soit verrouillé.
- Fixer la plaque d'assemblage.
- Remonter le panneau de commande.



- When using the optional stay
- Beim Verwenden der Anker-Option
- Lors de l'utilisation du hauban en option

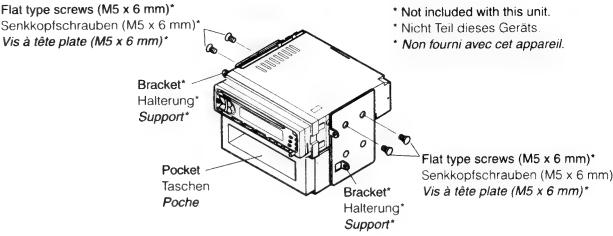


- When installing the unit without using the sleeve

- Beim Einbau des Geräts ohne Schutzhülle

- Lors de l'installation de l'appareil sans utiliser de manchon

In a Toyota for example, first remove the car radio and install the unit in its place. Zum Beispiel in einem Toyota zuerst das Autoradio ausbauen und dann das Gerät an seinem Platz einbauen. Par exemple dans une Toyota, retirer d'abord l'autoradio et installer l'appareil à la place.



**Nota:** When installing the unit on the mounting bracket, make sure to use the 6 mm-long screws. If longer screws are used, they could damage the unit.

**Hinweis:** Beim Anbringen des Gerät an der Halterung sicherstellen, daß 6 mm lange Schrauben verwendet werden. Werden längere Schrauben verwendet, können sie das Gerät beschädigen.

**Remarque:** Lors de l'installation de l'appareil sur le support de montage, s'assurer d'utiliser des vis d'une longueur de 6 mm. Si des vis plus longues sont utilisées, elles peuvent endommager l'appareil.

#### Removing the unit

- Before removing the unit, release the rear section.

**1** Remove the control panel.

**2** Remove the trim plate.

**3** Insert the 2 handles into the slots, as shown. Then, while gently pulling the handles away from each other, slide out the unit. (Be sure to keep the handles after installing it.)

#### Ausbau des Geräts

- Vor dem Ausbau des Geräts den hinteren Teil freigeben.

**1** Die Schalttafel abnehmen.

**2** Den Zierrahmen abnehmen.

**3** Die 2 Griffe in die Schlitze wie gezeigt stecken. Dann die Griffe behutsam auseinander ziehen und das Gerät herausziehen. (Die Griffe nach dem Einbau auf jeden Fall aufbewahren.)

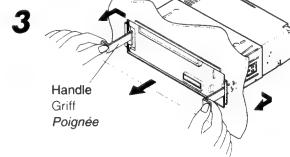
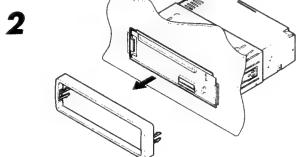
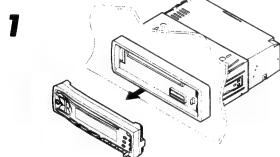
#### Retrait de l'appareil

- Avant de retirer l'appareil, libérer la section arrière.

**1** Retirer le panneau de commande.

**2** Retirer la plaque d'assemblage.

**3** Introduire les deux poignées dans les fentes, comme montré. Puis, tout en tirant doucement les poignées écartées, faire glisser l'appareil pour le sortir. (S'assurer de conserver les poignées après l'installation de l'appareil.)



#### Parts list for installation and connection

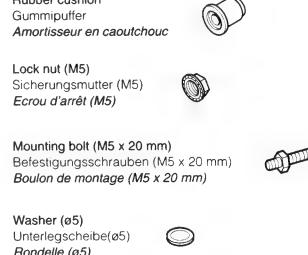
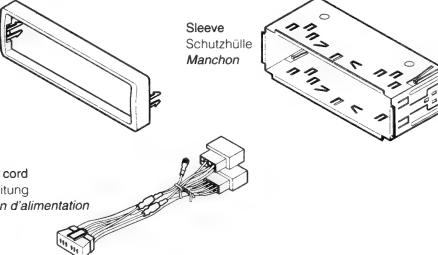
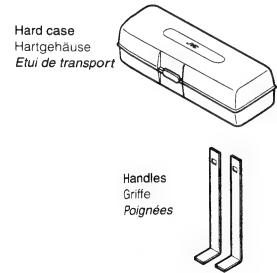
The following parts are provided with this unit. After checking them, please set them correctly.

#### Teileliste für den Einbau und Anschluß

Die folgenden Teile werden zusammen mit diesem Gerät geliefert. Nach ihrer Überprüfung, die Teile richtig einsetzen.

#### Liste des pièces pour l'installation et raccordement

Les pièces suivantes sont fournies avec cet appareil. Après vérification, veuillez les placer correctement.



#### TROUBLESHOOTING

- The fuse blows.
  - Are the red and black leads connected correctly?
- Power cannot be turned on.
  - Is the yellow lead connected?
- No sound from the speakers.
  - Is the speaker output lead short-circuited?
- Sound is distorted.
  - Is the speaker output lead grounded?
  - Are the “-” terminals of L and R speakers grounded in common?
- Unit becomes hot.
  - Is the speaker output lead grounded?
  - Are the “-” terminals of L and R speakers grounded in common?

#### FEHLERSUCHE

- Die Sicherung brennt durch.
  - Sind die roten und schwarzen Leitungen richtig angeschlossen?
- Stromversorgung kann nicht eingeschaltet werden.
  - Ist die gelbe Leitung angeschlossen?
- Kein Ton aus den Lautsprechern.
  - Ist die Lautsprecherausgangsleitung kurzgeschlossen?
- Ton verzerrt.
  - Ist die Lautsprecherausgangsleitung geerdet?
  - Sind die (-) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?
- Gerät wird heiß.
  - Ist die Lautsprecherausgangsleitung geerdet?
  - Sind die (-) Anschlußklemmen der linken und rechten Lautsprecher zusammen geerdet?

#### EN CAS DE DIFFICULTÉS

- Le fusible saute.
  - Les fils rouge et noir sont-ils raccordés correctement?
- L'appareil ne peut pas être mise sous tension.
  - Le fil jaune est-elle raccordée?
- Pas de son des haut-parleurs.
  - Le fil de sortie de haut-parleur est-il court-circuité?
- Le son est déformé.
  - Le fil de sortie de haut-parleur est-il à la masse?
  - Les bornes “-” des haut-parleurs gauche et droit sont-elles mises ensemble à la masse?
- L'appareil devient chaud.
  - Le fil de sortie de haut-parleur est-il à la masse?
  - Les bornes “-” des haut-parleurs gauche et droit sont-elles mises ensemble à la masse?

## ENGLISH

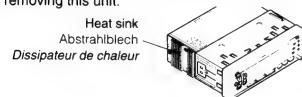
## ELECTRICAL CONNECTIONS

To prevent short circuits, we recommend that you disconnect the battery's negative terminal and make all electrical connections before installing the unit. If you are not sure how to install this unit correctly, have it installed by a qualified technician.

## Note:

This unit is designed to operate only on **12 volts DC, NEGATIVE ground electrical systems**. If your vehicle does not have this system, a voltage inverter is required, which can be purchased at JVC IN-CAR ENTERTAINMENT dealers.

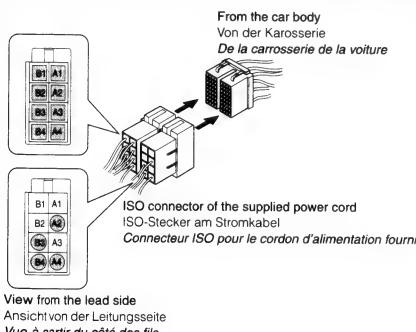
- Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC IN-CAR ENTERTAINMENT dealer.
- If noise is a problem... This unit incorporates a noise filter in the power circuit. However, with some vehicles, clicking or other unwanted noise may occur. If this happens, connect the unit's **rear ground terminal** (See connection diagram below) to the car's chassis using shorter and thicker cords, such as copper braiding or gauge wire. If noise still persists, consult your JVC IN-CAR ENTERTAINMENT dealer.
- Maximum input of the speakers should be more than 35 watts at the rear and 35 watts at the front, with an impedance of **4 to 8 ohms**.
- Be sure to ground this unit to the car's chassis.**
- The heat sink becomes very hot after use. Be careful not to touch it when removing this unit.

**A If your car is equipped with the ISO connector**

Wenn Ihr Auto mit ISO-Steckern ausgestattet ist

## Si votre voiture est équipée d'un connecteur ISO

- Connect the ISO connectors as illustrated.
- Die ISO-Stecker wie abgebildet anschließen.
- Connectez les connecteurs ISO comme montré sur l'illustration.



## DEUTSCH

## ELEKTRISCHE ANSCHLÜSSE

Zur Vermeidung von Kurzschlüssen empfehlen wir, daß Sie den negativen Batterieanschluß abtrennen und alle elektrischen Anschlüsse herstellen, bevor das Gerät eingebaut wird. Sind Sie sich über den richtigen Einbau des Geräts nicht sicher, lassen Sie es von einem qualifizierten Techniker einbauen.

## Hinweis:

Dieses Gerät ist für den Betrieb in **elektrischen Anlagen mit 12 V Gleichstrom und (-) Erdung** ausgelegt. Verfügt Ihr Fahrzeug nicht über diese Anlage, ist ein Spannungsinverter erforderlich, der bei JVC Auto rad iohandler erworben werden kann.

- Die Sicherung mit einer der entsprechenden Nennleistung ersetzen. Brennt die Sicherung häufig durch, wenden Sie sich an Ihren JVC Autoradiohändler.
- Sind Störgeräusche ein Problem...

Dieses Gerät enthält ein Störfilter im Stromkreis. Bei manchen Fahrzeugen kann jedoch ein Klicken oder anderes unerwünschte Störgeräusche auftreten. Sollte das der Fall sein, die **hintere Erdungsanschlußklemme** (siehe Schaltplan unten) des Geräts am Fahrwerk des Fahrzeugs anschließen, dabei kürzere und dicke Kabel wie beispielsweise Kupfergeflechtdraht oder Stahldrat verwenden. Bleibt Störgeräusche bestehen, wenden Sie sich an Ihren JVC Auto rad iohandler.

- Maximale Eingangsleistung der Lautsprecher muß höher als 35 W hinten und 35 W vorne sein, mit einer Impedanz von **4 bis 8 Ohm**.

- Sicherstellen, daß das Gerät am Fahrwerk geerdet wird.**
- Das Abstrahlblech wird nach dem Gebrauch sehr heiß. Beim Ausbau des Geräts darauf achten, das Abstrahlblech nicht zu berühren.

## FRANÇAIS

## RACCORDEMENTS ELECTRIQUES

Pour éviter tout court-circuit, nous vous recommandons de débrancher la borne négative de la batterie et d'effectuer tous les raccordements électriques avant d'installer l'appareil. Si l'on n'est pas sûr de pouvoir installer correctement cet appareil, le faire installer par un technicien qualifié.

## Remarque:

Cet appareil est conçu pour fonctionner sur des sources de courant continu de **12 volts à masse NEGATIVE** seulement. Si votre véhicule n'offre pas ce type d'alimentation, il vous faut un convertisseur de tension, que vous pouvez acheter chez un revendeur d'autoradios JVC.

- Remplacer le fusible par un de la valeur précisée. Si le fusible saute souvent, consulter votre revendeur d'autoradios JVC.
- Si le bruit est un problème...

Cet appareil incorpore un filtre de bruit dans le circuit d'alimentation. Cependant, avec certains véhicules, quelques claquements ou autres bruits non désirés risquent de se produire. Si cela arrive, raccorder la **borne de masse arrière** de l'appareil au **châssis de la voiture** (voir le schéma de raccordement ci-dessous) en utilisant des cordons les plus gros et les plus courts possibles telle qu'une barre de cuivre ou une tresse. Si le bruit persiste, consulter votre revendeur d'autoradios JVC.

- La puissance admissible des haut-parleurs doit être supérieure à 35 watts à l'arrière et à 35 watts l'avant, avec une impedance de 4 à 8 ohms.

- S'assurer de raccorder la **mise à la masse** de cet appareil au **châssis de la voiture**.
- Le radiateur devient très chaud après usage. Faire attention de ne pas le toucher en retirant cet appareil.

**B For some VW/Audi or Opel (Vauxhall) automobile**

Für manche VW/Audi oder Opel (Vauxhall) Fahrzeuge

Pour certaine voiture VW/Audi ou Opel (Vauxhall)

You may need to modify the wiring of the supplied power cord as illustrated.

- Contact your authorized car dealer before installing this unit.

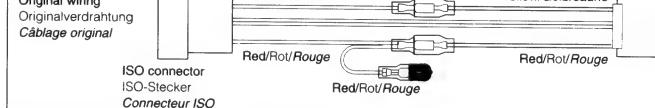
Sie müssen evtl. die Verdrahtung des mitgelieferten Stromkabels wie abgebildet ändern.

- Wenden Sie sich an Ihre Vertragswerkstatt, bevor Sie das Gerät einbauen.

Vous aurez peut-être besoin de modifier le câblage du cordon d'alimentation fourni comme montré sur l'illustration.

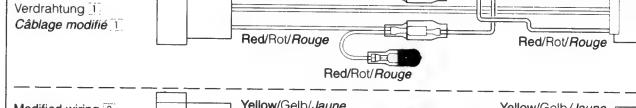
- Contactez votre revendeur automobile autorisé avant d'installer l'appareil.

Original wiring  
Originalverdrahtung  
Câblage original



## Modified wiring ①

Geänderte  
Verdrahtung ①  
Câblage modifié ①



## Modified wiring ②

Geänderte  
Verdrahtung ②  
Câblage modifié ②



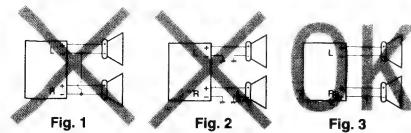
Use modified wiring ② if the unit does not turn on.

Geänderte Verdrahtung ② verwenden, wenn das Gerät so nicht an geht.

Utilisez le câblage modifié ② si l'appareil ne se met pas sous tension.

## PRECAUTIONS on power supply and speaker connections:

- DO NOT connect the speaker leads of the power cord to the car battery; otherwise, the unit will be seriously damaged.
- Connect the black lead (ground), yellow lead (to car battery, constant 12V), and red lead (to an accessory terminal) correctly.
- BEFORE connecting the speaker leads of the power cord to the speakers, check the speaker wiring in your car.
- If the speaker wiring in your car is as illustrated in Fig. 1 and Fig. 2 below, DO NOT connect the unit using that original speaker wiring. If you do, the unit will be seriously damaged.
- Redo the speaker wiring so that you can connect the unit to the speakers as illustrated in Fig. 3.
- If the speaker wiring in your car is as illustrated in Fig. 3, you can connect the unit using the original speaker wiring in your car.
- If you are not sure of the speaker wiring of your car, consult your car dealer.



## VORSICHTSMASSREGELN beim Anschließen der Stromversorgung und Lautsprecher:

- Die Lautsprecherleitungen des Netzketabels NICHT an der Autobatterie anschließen, da sonst das Gerät schwer beschädigt wird.

Die schwarze Leitung (Erdung), die gelbe Leitung (zur Autobatterie, konstant 12 V) und die rote Leitung (zur Zubehörschlüsselklemme) richtig anschließen.

- VOR dem Anschließen der Lautsprecherleitungen des Netzketabels an die Lautsprecher, die Lautsprecherverdrahtung in Ihrem Auto überprüfen.

Ist die Lautsprecherverdrahtung wie unten in Fig. 1 und 2 abgebildet, das Gerät NICHT mit der Originalverdrahtung der Lautsprecher anschließen, da sonst das Gerät schwer beschädigt wird.

Die Lautsprecherverdrahtung erneuern, so daß Sie das Gerät an den Lautsprechern wie in Fig. 3 abgebildet anschließen können.

- Ist die Lautsprecherverdrahtung in Ihrem Auto wie in Fig. 3 abgebildet, können Sie das Gerät mit der Originalverdrahtung der Lautsprecher in Ihrem Auto anschließen.

Sind Sie sich über die Lautsprecherverdrahtung in Ihrem Auto nicht sicher, wenden Sie sich an Ihren Autohändler.

## PRECAUTIONS sur l'alimentation et la connexion des enceintes:

- NE CONNECTEZ PAS les fils d'enceintes du cordon d'alimentation à la batterie; sinon, l'appareil sera sérieusement endommagé.

Connectez correctement le fil noir (à la masse), le fil jaune (à la batterie de la voiture, 12V constant) et le fil rouge (à la prise accessoire).

- AVANT de connecter les fils d'enceintes du cordon d'alimentation aux enceintes, vérifiez le câblage des enceintes de votre voiture.

Si le câblage des enceintes de votre voiture est réalisé comme montré sur la Fig. 1 ou Fig. 2 ci-dessous, NE CONNECTEZ PAS l'appareil en utilisant ce câblage original d'enceintes. Si vous le faites, l'appareil sera sérieusement endommagé.

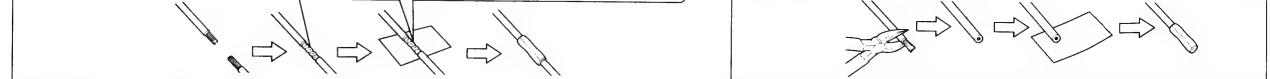
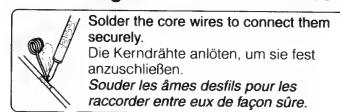
Recommencez le câblage des enceintes de façon que vous puissiez connecter l'appareil aux enceintes comme montré sur la Fig. 3.

- Si le câblage des enceintes de votre voiture est comme montré sur la Fig. 3, vous pouvez connecter l'appareil en utilisant ce câblage original d'enceintes pour votre voiture.

Si vous n'êtes pas sûrs du câblage d'enceintes de votre voiture, consulter le concessionnaire de votre voiture.

## Connecting the leads / Anschließen der Leitungen / Raccordement des fils

Twist the core wires when connecting.  
Die Kerndrähte beim Anschließen verdrehen.  
Torsader les âmes des fils en les raccordant.



## **B** Connections without using the ISO connectors / Anschlüsse ohne ISO-Stecker / Connexions sans l'utilisation des connecteurs ISO

**Before connecting:** Check the wiring in the vehicle carefully not to fail in connecting this unit. Incorrect connection may cause a serious damage to this unit.

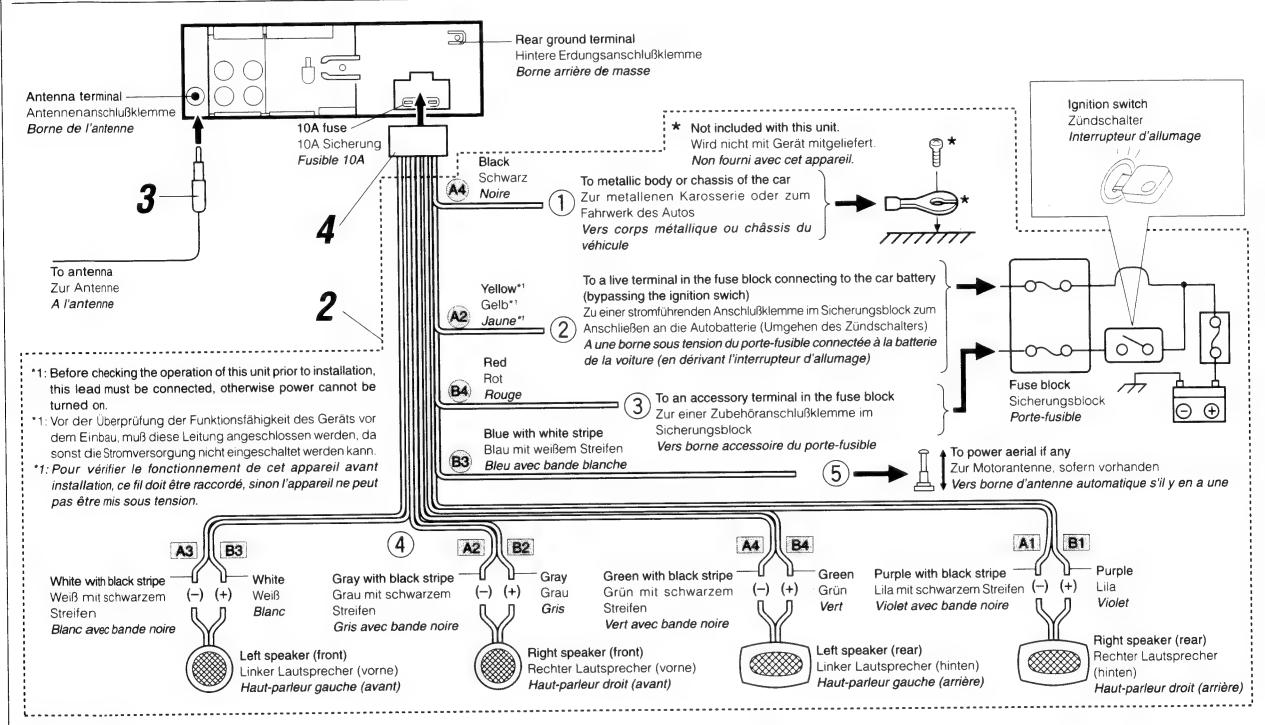
- 1 Cut the ISO connector.
- 2 Connect the colored leads of the power cord to the car battery, speakers and power aerial (if any) in the following sequence.
  - 1: Black: ground
  - 2: Yellow: to car battery (constant 12V)
  - 3: Red: to an accessory terminal
  - 4: Others (except blue with white stripe): to speakers
  - 5: Blue with white stripe: to power aerial (200mA max.)
- 3 Connect the antenna cord.
- 4 Finally connect the wiring harness to the unit.

**Vor dem Anschließen:** Die Verdrahtung im Fahrzeug sorgfältig überprüfen, damit sie beim Anschließen am Gerät nicht versagt. Falsche Anschlüsse können ernsthafte Schäden am Gerät hervorrufen.

- 1 Den ISO-Stecker abschneiden.
- 2 Die farbigen Leitungen des Netzkabels an der Autobatterie, den Lautsprechern und dem Motorantenne (sofern vorhanden) in folgender Reihenfolge anschließen:
  - 1 Schwarz: Erdung
  - 2 Gelb: an autobatterie (konstant 12 V)
  - 3 Rot: an Zubehöranschlussklemme
  - 4 Andere (außer blau mit weißem Streifen): an Lautsprecher
  - 5 Blau mit weißem Streifen: an Motorantenne (200mA maximale)
- 3 Das Antennenkabel anschließen.
- 4 Die Kabelbäume am Gerät anschließen.

**Avant de commencer la connexion:** vérifiez attentivement le câblage du véhicule pour ne pas connecter incorrectement cet appareil. Une connexion incorrecte peut endommager sérieusement l'appareil.

- 1 Coupez le connecteur ISO.
- 2 Connectez les fils de couleur du cordon d'alimentation à la batterie de la voiture, aux enceintes et à l'antenne automatique (s'il y en a une) dans l'ordre suivant.
  - 1 Noir: à la masse
  - 2 Jaune: à la batterie de la voiture (12V constant)
  - 3 Rouge: à la prise accessoire
  - 4 Autres fils à l'exception du fil bleu à bandes blanches: aux enceintes
  - 5 Bleu à bandes blanches: à l'antenne automatique (200mA maximum)
- 3 Connectez le cordon d'antenne.
- 4 Finalement, connectez le faisceau de fils à l'appareil.

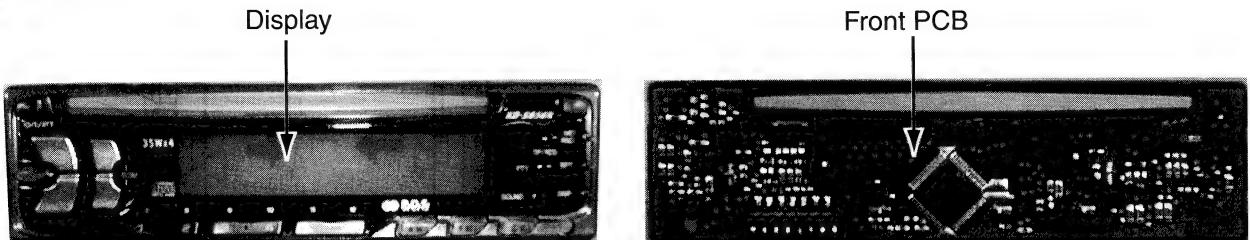


KD-S656R/KD-S653R

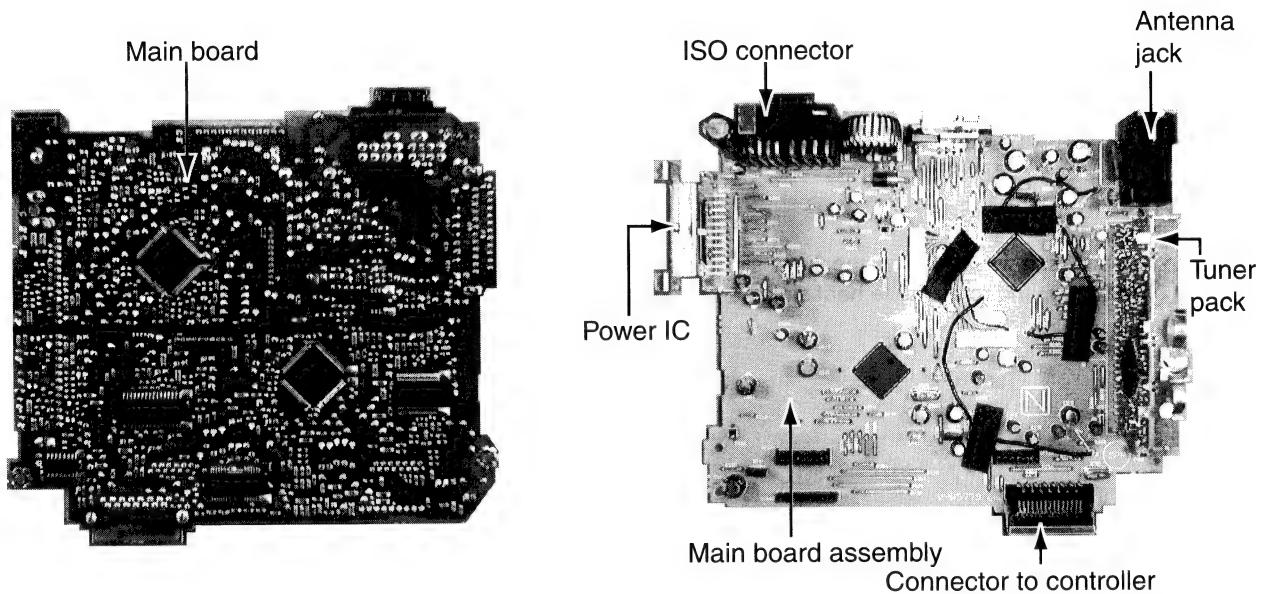
<<MEMO>>

## Location of Main Parts

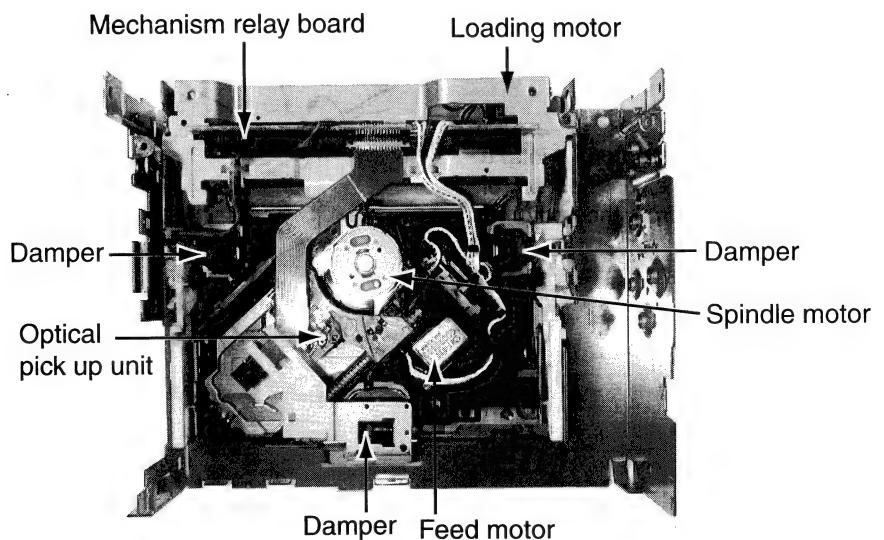
### ■ Control unit



### ■ Main unit



### ■ CD mechanism



## Removal of Main Parts

### ■ Removing the Front Chassis (See Fig. 1)

1. Insert a screwdriver to the two joints **a** on the left side of the front chassis and two joints **b** on the right side, then detach the front chassis toward the front side.

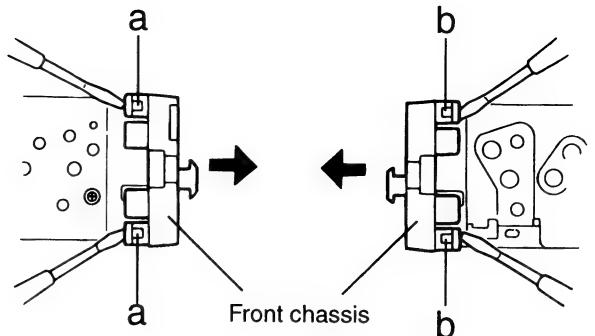


Fig. 1

### ■ Removing the Heat Sink (See Fig. 2)

1. Remove the three A screws attaching the heat sink on the left side of the body, and remove the heat sink.

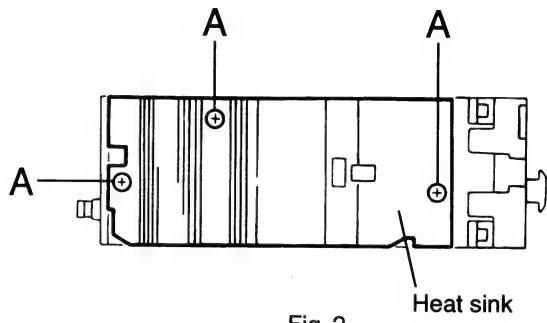


Fig. 2

### ■ Removing the Bottom cover (See Fig. 3)

1. Turn the body upside down.
2. Insert a screwdriver to the two joints **c** and one joints **d** on both sides of the body and the joint **e** on the back of the body, then detach the bottom cover from the body.

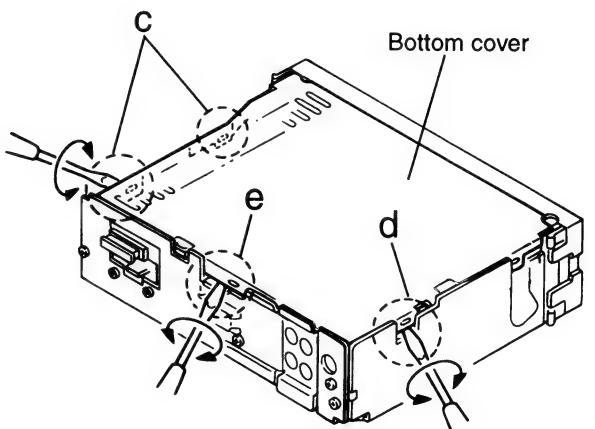


Fig. 3

## ■ Removing the Main Amplifier Board Assembly

(See Fig. 4 and 5)

1. Remove the front panel assembly.
2. Remove the bottom cover.
3. Remove the two screws B attaching the main amplifier board assembly on the bottom of the body.
4. Remove the three screws C attaching the main amplifier board assembly on the back of the body.
5. Disconnect connector CN501 and CN502 on the main amplifier board assembly from the CD mechanism assembly.

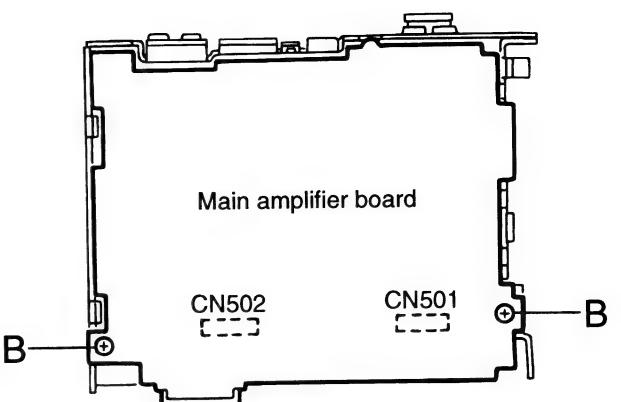


Fig. 4

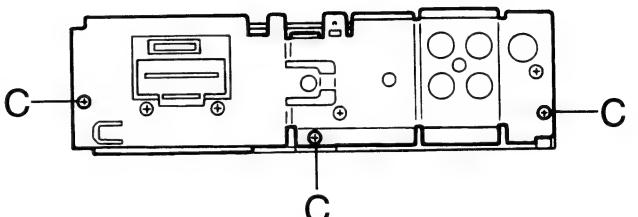


Fig. 5

## ■ Removing the CD Mechanism Assembly

(See Fig. 6)

1. Remove the front panel assembly.
2. Remove the bottom cover.
3. Remove the main amplifier board assembly.
4. Remove the three screws D attaching the CD mechanism assembly from the top cover.

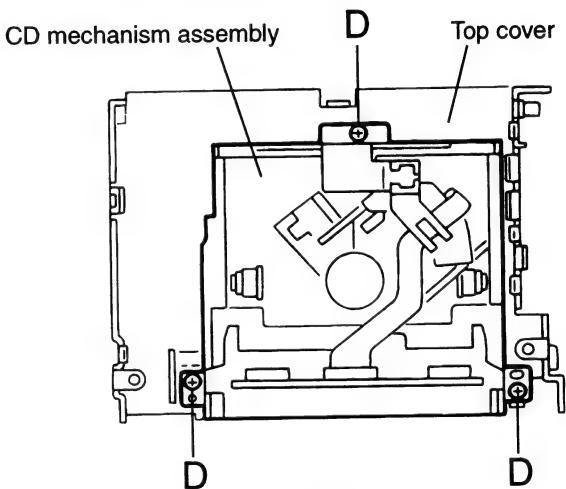


Fig. 6

## ■ Removing the Control Switch Board

(See Fig. 7 and 8)

1. Remove the front panel assembly.
2. Remove the four screws E attaching the rear cover on the back of the front panel unit.
3. Remove the control switch board from the front panel unit.

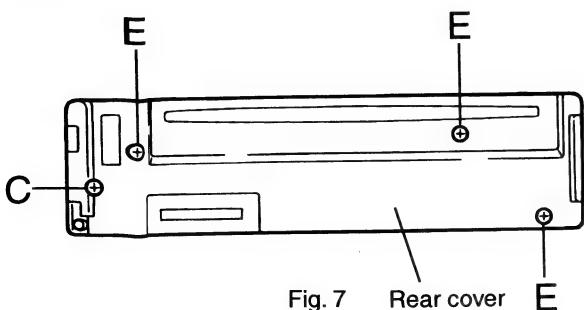


Fig. 7

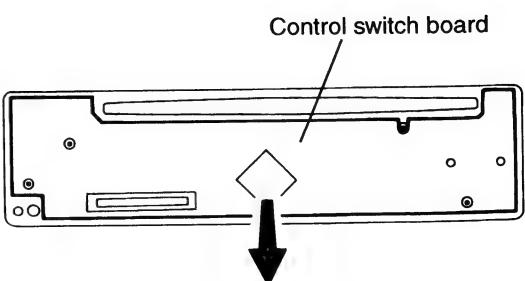


Fig. 8

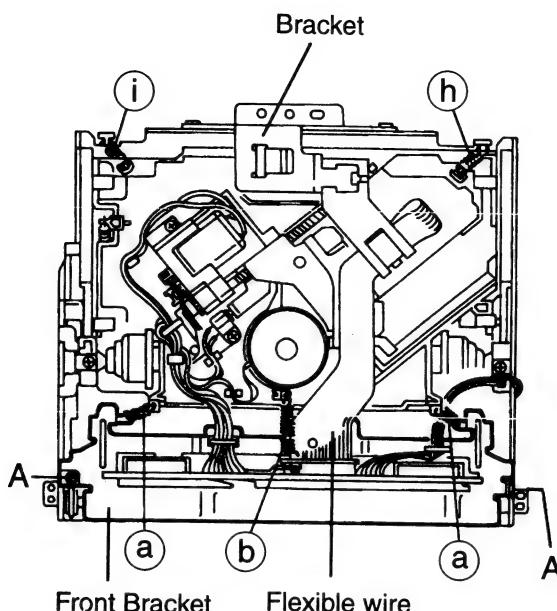


Fig. 9

## [ CD Mechanism Section ]

### ■ Removing the CD mechanism control P.C.board

1. Remove the CD mechanism assembly (See "Removing the CD mechanism assembly").
2. Remove the three springs **a** and **b** from behind the CD mechanism assembly (See Fig. 9).
3. Disc connect the flexible wire connected to the connector on the CD mechanism control P.C.board (See Fig. 9).
4. Remove the one screw **B** retaining the CD mechanism control P.C.board (See Fig. 10).
5. After disengaging the engagement between the notch section **C** and frame, remove the CD mechanism Control P.C. board successively from **①** through to **③** in the arrow direction as shown in Fig. 10.

**CAUTION:** Whenever the flexible wire is disconnected, be sure to remove the soldering in advance as shown in Fig. 11. Otherwise, the CD mechanism assembly can possibly be damaged.

6. Remove the two screws **A** retaining the front bracket for fixing the CD mechanism control P.C. board (See Fig. 9).

**CAUTION:** Remove the front bracket from the frame while expanding both sides of the frame as shown in Fig. 13

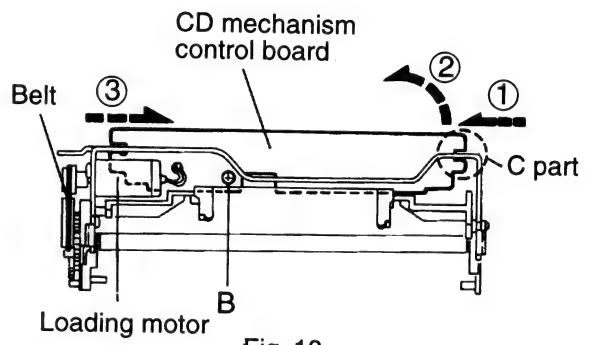


Fig. 10

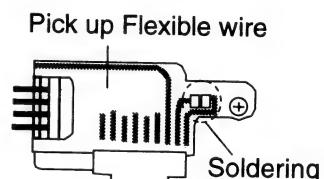


Fig. 11

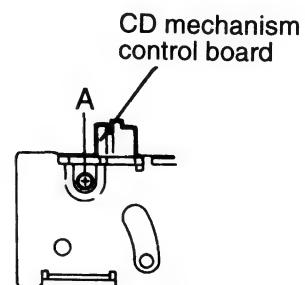


Fig. 12

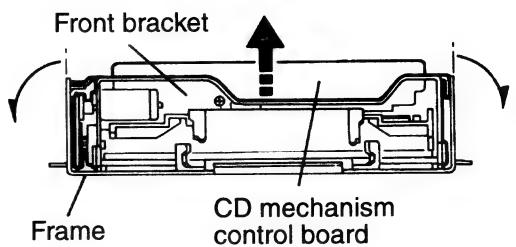


Fig. 13

## ■ Removing the loading motor

1. Remove the belt from the loading motor (See Fig. 13 and Fig. 14)
2. Remove the one screw C retaining the loading motor (See Fig. 14)

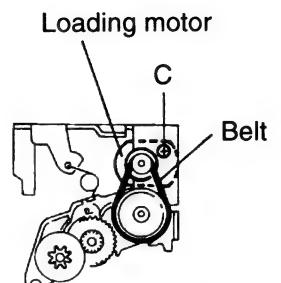


Fig. 14

## ■ Removing the CD mechanism assembly

1. Remove the two screws D retaining the bracket for fixing the damper (See Fig. 15)
2. When shining the fix places on the right and left Sides respectively to the arrow direction, lower the entire CD mechanism. When the shafts (d, e, f and g) on both the right and left sides have been set free as shown in Fig. 16 and Fig. 17, then the assembly can be removed easily. Remove the two screws E retaining the rear damper bracket to make it easier to remove the damper from the rear damper bracket (See Fig. 9, Fig. 16 and Fig. 17).
3. Remove the two springs (h) and (i) as shown in Fig. 9 and Fig 15.
4. While removing the right and left sides of the rear damper brackets and dampers While expanding both sides of the CD mechanism, disassemble the entire CD mechanism.

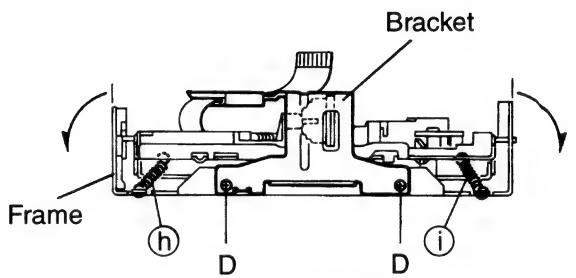


Fig. 15

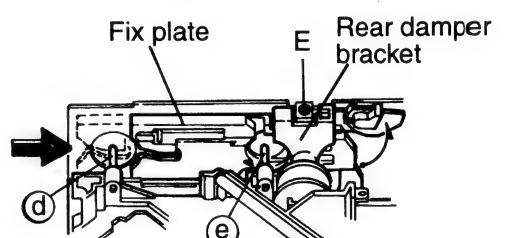


Fig. 16

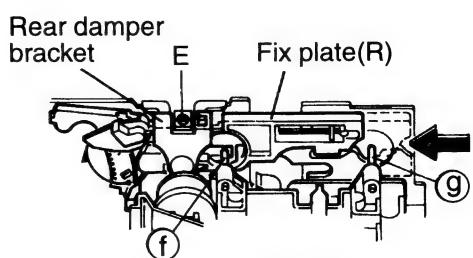


Fig. 17

5. While tuning the pickup gear in the arrow direction as shown in Fig. 19, shift the entire pickup unit.
6. Remove the three screws F retaining the feed motor assembly and take out this motor assembly (See Fig. 18).
7. While pressing and expanding the spring section holding the FD screw in the arrow direction, remove the FD screw and dismount the pickup unit (See Fig. 20).
8. By removing the two screw G retaining the pickup unit, dismount the nut push spring plate and pickup mount nut (See Fig. 21).
9. Remove the FD screw from the pickup unit (See Fig. 21).

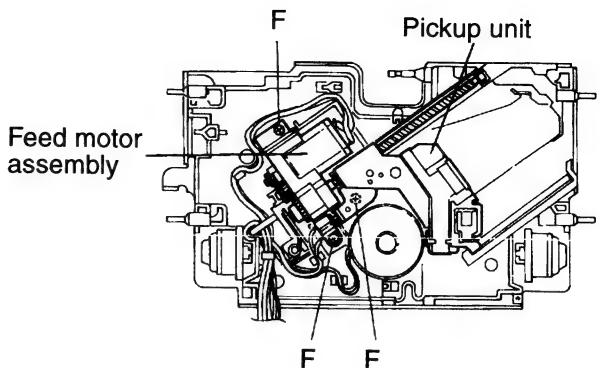


Fig. 18

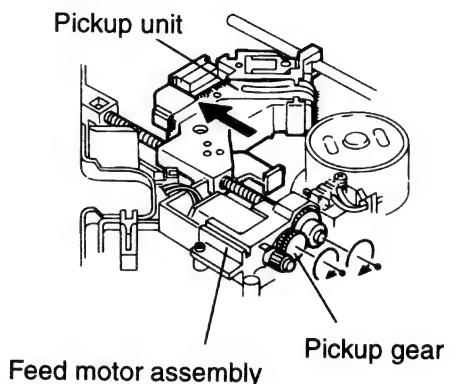


Fig. 19

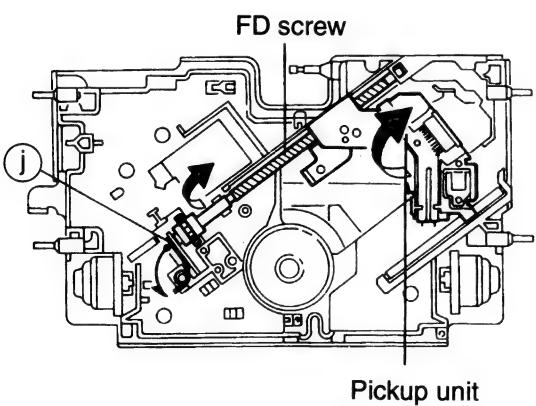


Fig. 20

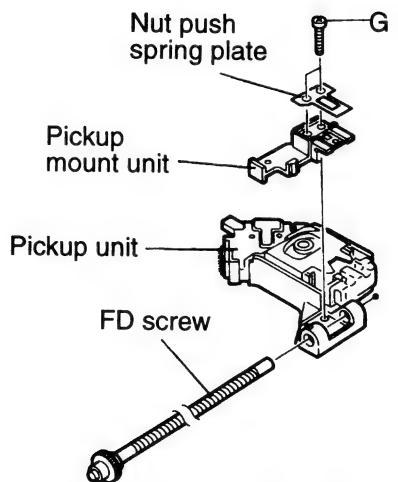


Fig. 21

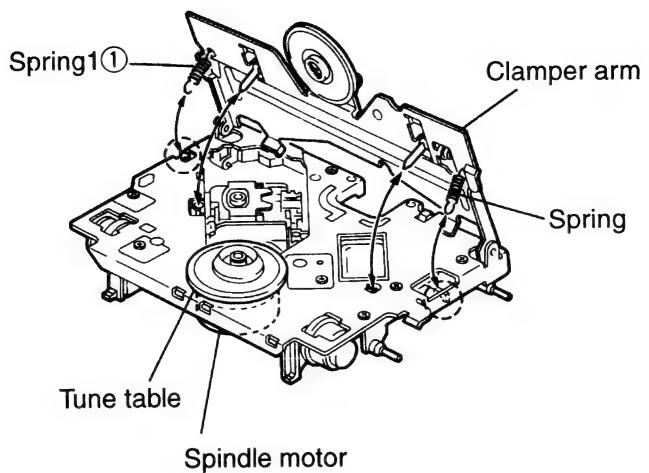


Fig. 22

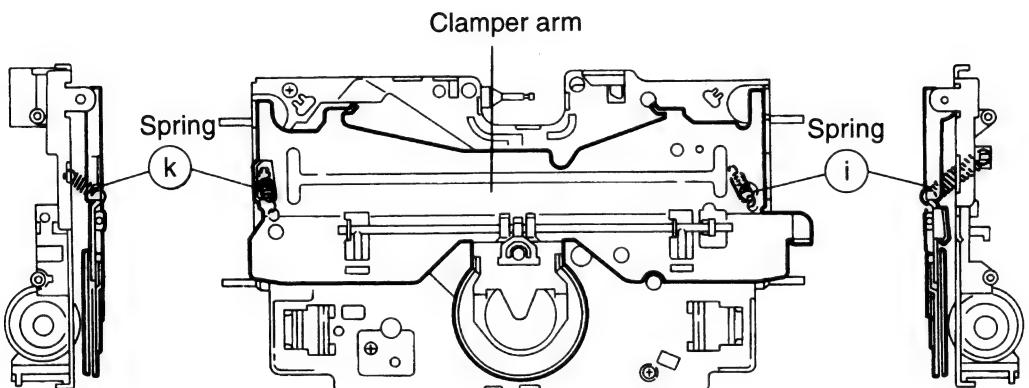


Fig. 23-a

Fig. 23

Fig. 23-b

## ■ Removing the spindle motor

1. After turning back the CD mechanism to initial position, remove the two sparrings (k) and (i) on both the right and left sides of the clamper arm (See Fig. 22 and Fig. 23).
2. While turning the turntable, remove the two screws (8) retaining the spindle motor and take out the spindle motor (See Fig. 24).

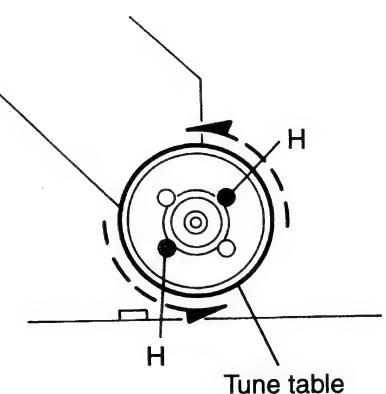


Fig. 24

## Main Adjustment

### ■ Test instruments required for adjustment

1. Digital oscilloscope (100MHz)
2. AM Standard signal generator
3. FM Standard signal generator
4. Stereo modulator
5. Electric voltmeter
6. Digital tester
7. Tracking offset meter
8. Test Disc JVC :CTS-1000
9. Extension cable for check

EXTGS003-14P × 1  
EXTGS003-12P × 2

### ■ Standard volume position

Balance and Bass & Treble volume : Indication "0"

Loudness : OFF

BBE : OFF

Frequency Band

### ■ FM 87.5MHz ~ 108.0MHz

MW 522kHz ~ 1620 kHz

LW 144kHz ~ 279kHz

### ■ Dummy load

Exclusive dummy load should be used for AM, and FM. For FM dummy load, there is a loss of 6dB between SSG output and antenna input. The loss of 6dB need not be considered since direct reading of figures are applied in this working standard.

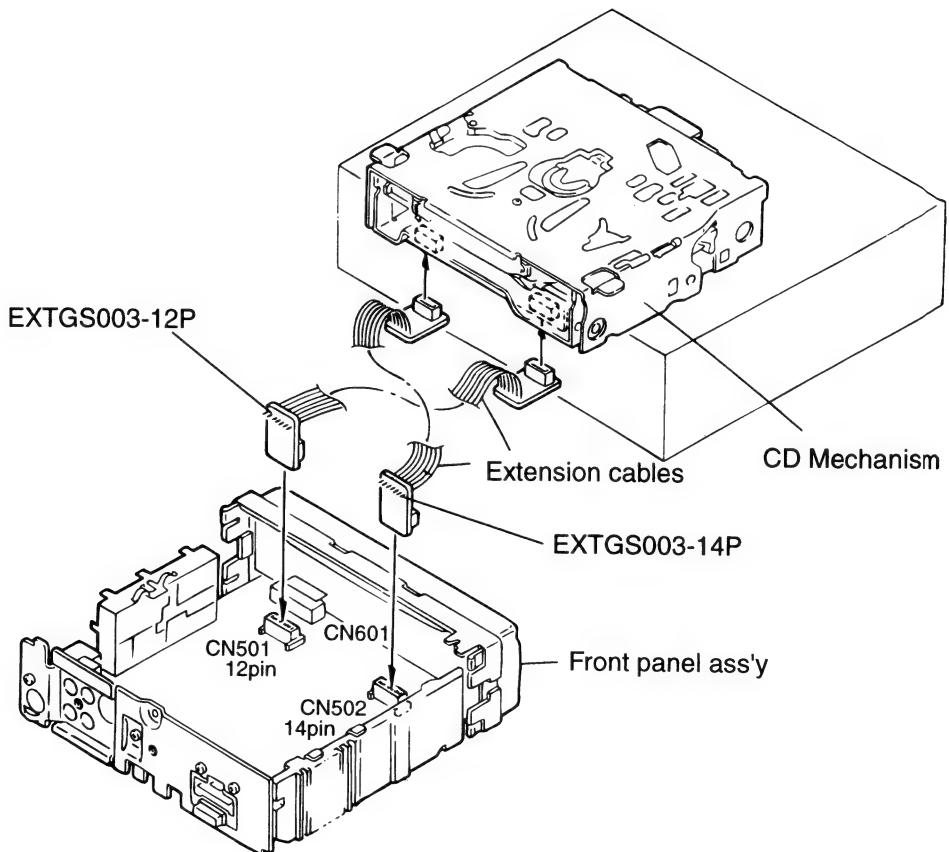
### ■ Standard measuring conditions

Power supply voltage DC14.4V(10.5~16V)

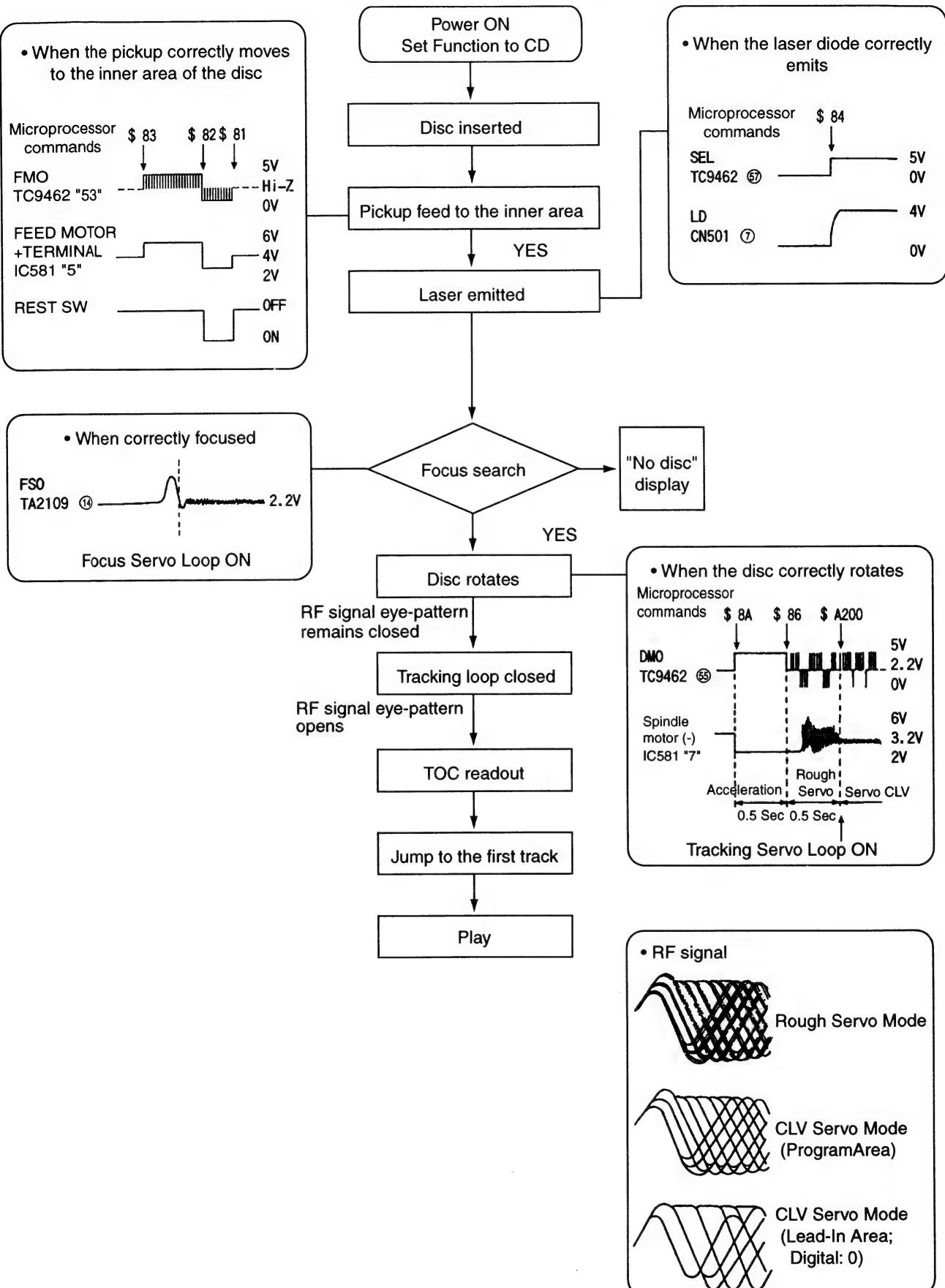
Load impedance 20Kohm (2 Speakers connection)

Output Level Line out 2.0V (Vol. MAX)

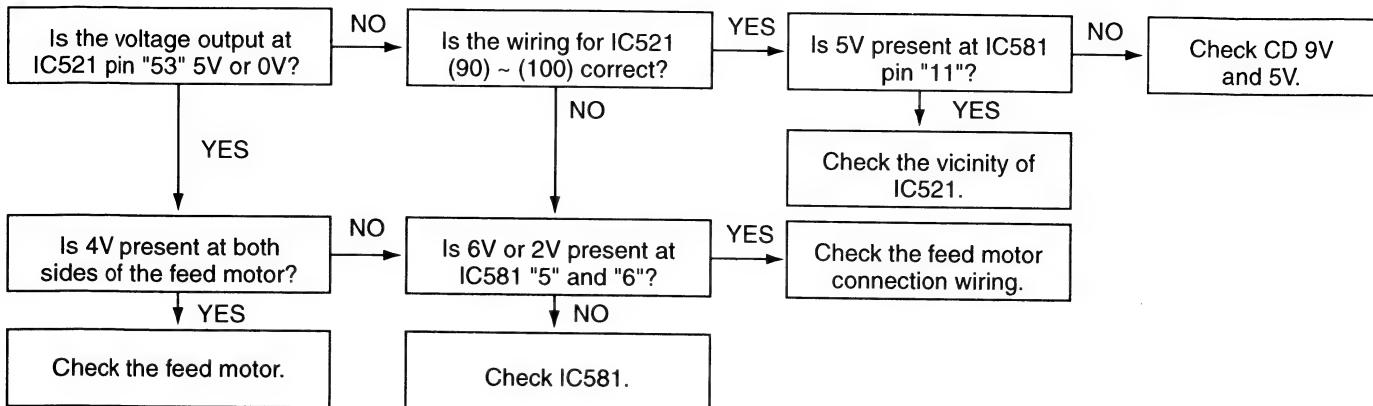
### ■ How to connect the extension cable for adjusting



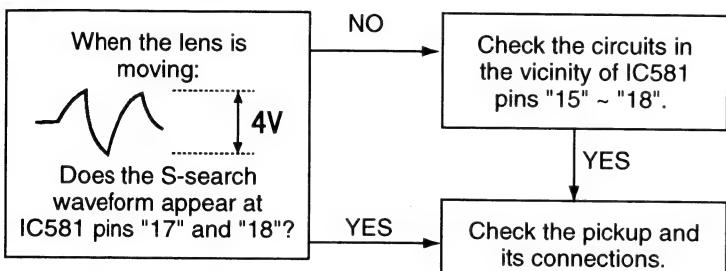
## Flow of Functional Operation Until TOC Read



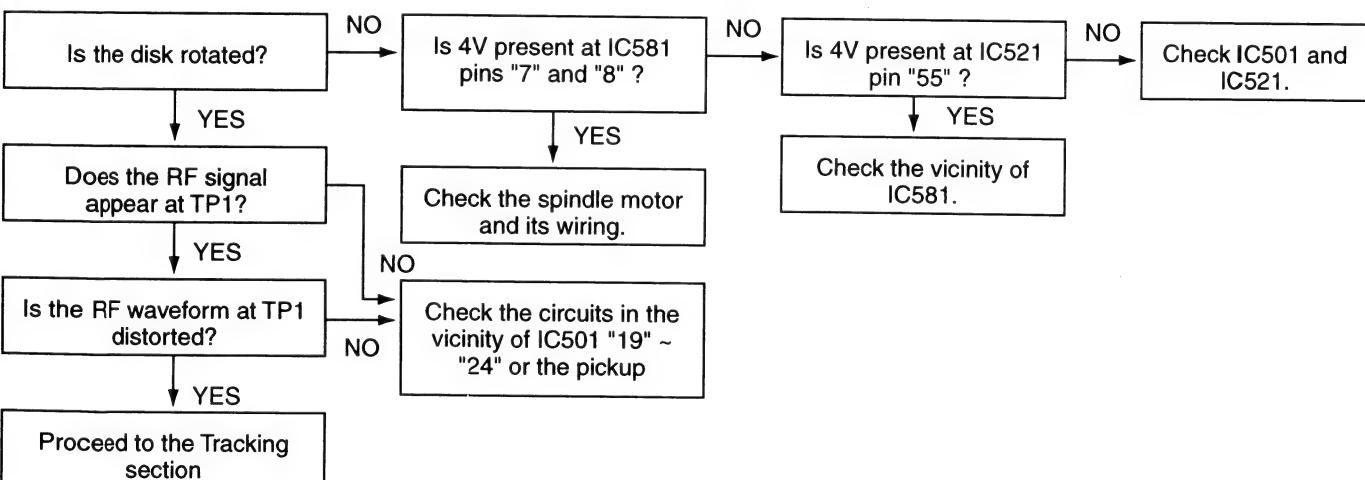
### ■ Feed Section



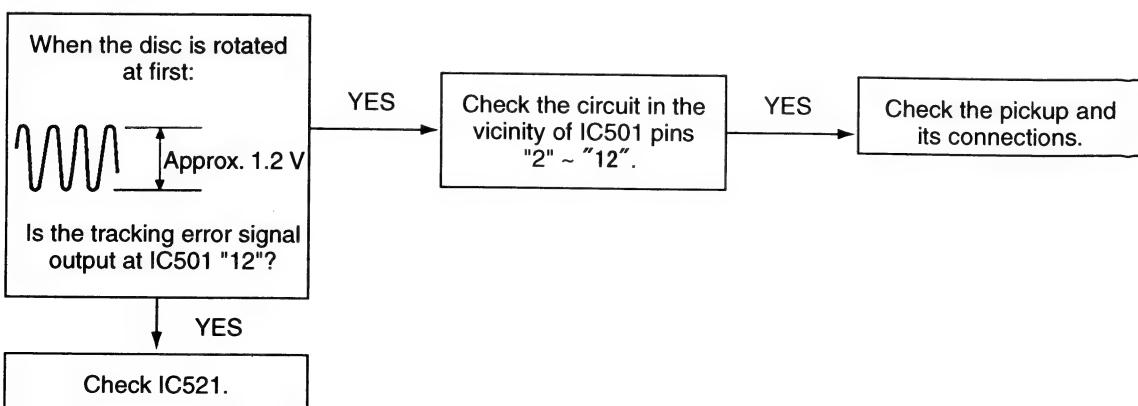
### ■ Focus Section



### ■ Spindle Section



### ■ Tracking Section



## Maintenance of Laser Pickup

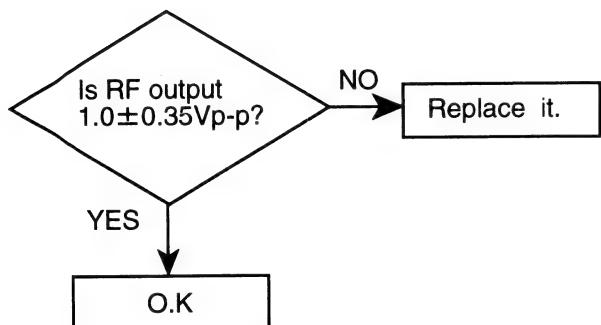
### (1) Cleaning the pick up lens

Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

### (2) Life of the laser diode

When the life of the laser diode has expired, the following symptoms will appear.

- (1) The level of RF output (EFM output:amplitude of eye pattern) will be low.



### (3) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

## Replacement of Laser Pickup

Turn off the power switch and, disconnect the power cord from the ac outlet.

Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)

Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.  
Note: Do not observe the laser beam directly.

Play a disc.

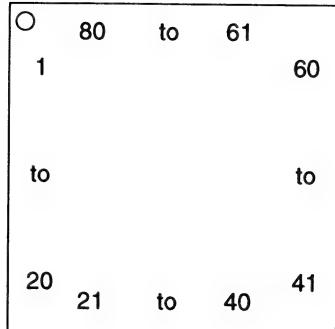
Check the eye-pattern at TP1.

Finish.

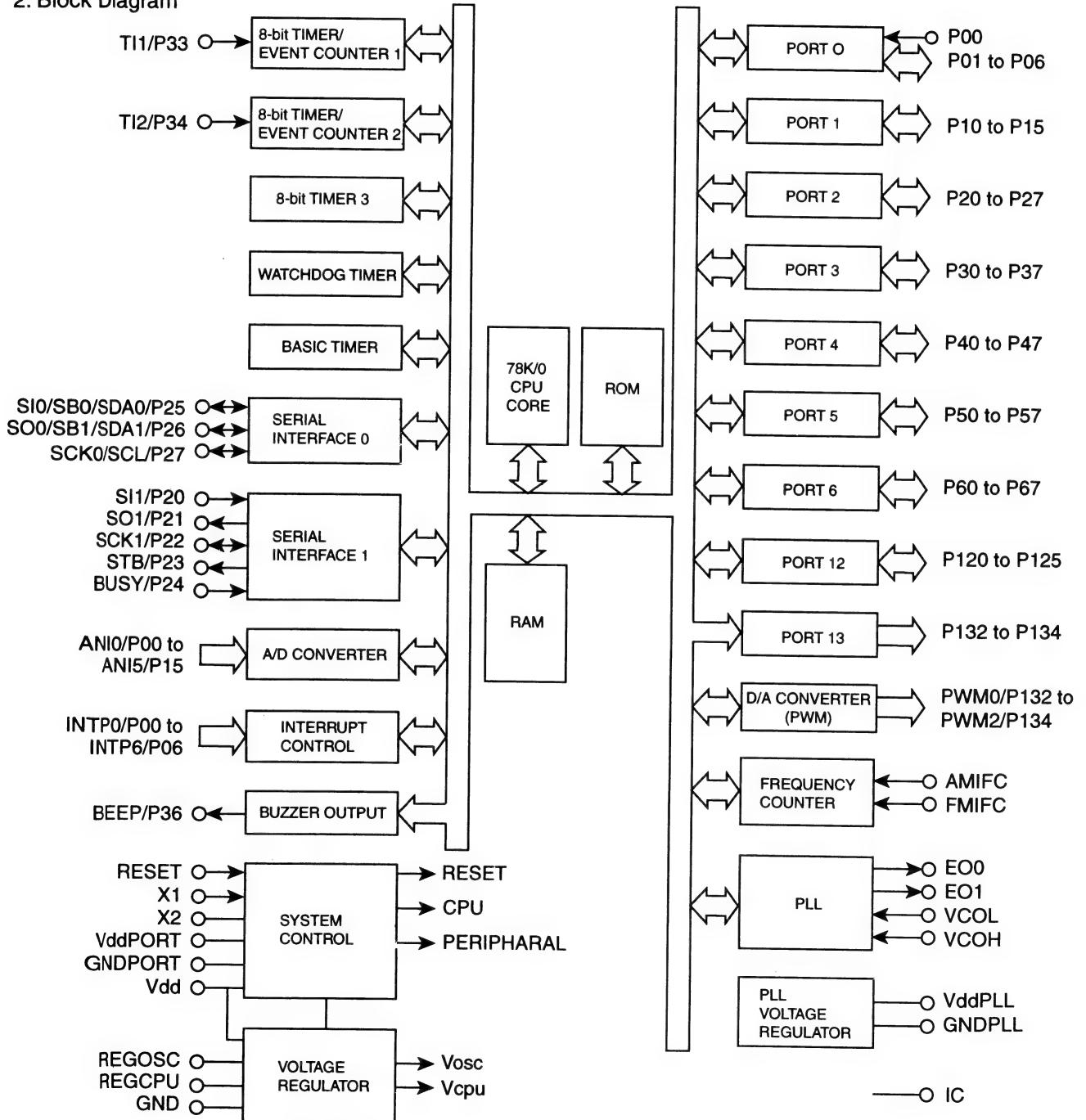
## Description of Major ICs

## ■ UPD178016AGC (IC701) : SYSTEM CONTROL CPU

## 1. Pin Layout



## 2. Block Diagram



## 3. Pin Functions

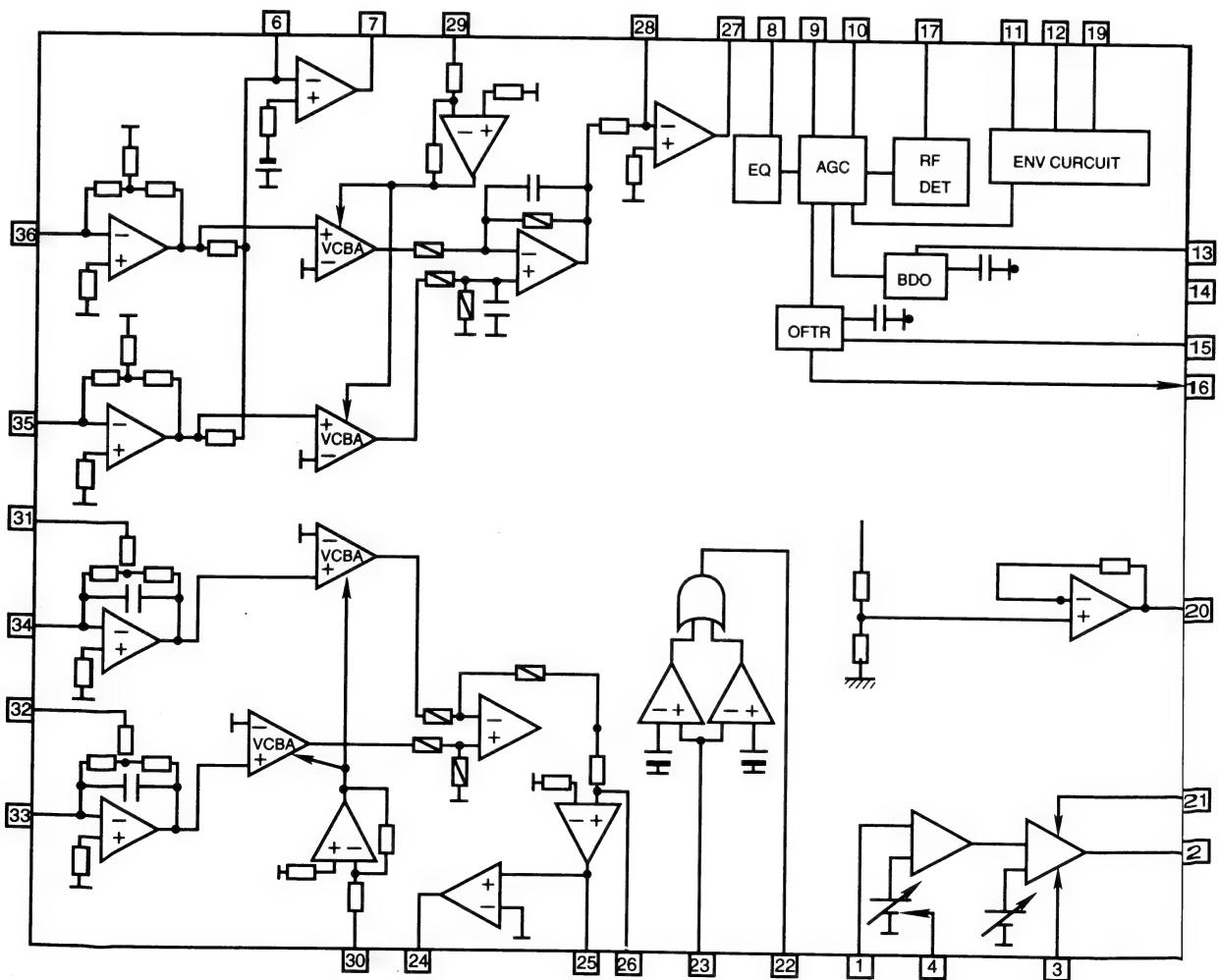
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	KBY0	I/O	6-bit input/output port	41	CDON	I/O	8-bit input/output port
2	KBY1	I/O	6-bit input/output port	42	NC	--	Non connection
3	KBY2	I/O	6-bit input/output port	43	NC	--	Non connection
4	SM	I/O	6-bit input/output port	44	NC	--	Non connection
5	SQ	I/O	6-bit input/output port	45	NC	--	Non connection
6	NC	--	Non connection	46	NC	--	Non connection
7	SUBQ	I/O	8-bit input/output port	47	NC	--	Non connection
8	NC	--	Non connection	48	FM/AM	I/O	8-bit input/output port
9	SQCK	I/O	8-bit input/output port	49	POWER	I/O	8-bit input/output port
10	I2CDAO	I/O	8-bit input/output port	50	NC	--	Non connection
11	I2CDAI	I/O	8-bit input/output port	51	NC	--	Non connection
12	LCDSCK	I/O	8-bit input/output port	52	MUTE	I/O	8-bit input/output port
13	RESTSW	I/O	8-bit input/output port	53	PS1	I/O	8-bit input/output port
14	DETACH	I/O	8-bit input/output port	54	LM1	I/O	8-bit input/output port
15	NC	--	Non connection	55	LM0	I/O	8-bit input/output port
16	NC	--	Non connection	56	SW4	I/O	8-bit input/output port
17	NC	--	Non connection	57	SW3	I/O	8-bit input/output port
18	NC	--	Non connection	58	SW2	I/O	8-bit input/output port
19	LCDCB	I/O	8-bit input/output port	59	LSIRESET	I/O	8-bit input/output port
20	LCDCA	I/O	8-bit input/output port	60	STAT	I/O	8-bit input/output port
21	GND	--	Ground for port block	61	TLOCK	I/O	6-bit input/output port
22	Vdd	--	Positive power supply for port block	62	FLOCK	I/O	6-bit input/output port
23	I2CCLK	I/O	8-bit input/output port	63	SENSR	I/O	6-bit input/output port
24	AFCK	I/O	8-bit input/output port	64	MLD	I/O	6-bit input/output port
25	MONO	I/O	8-bit input/output port	65	MDATA	I/O	6-bit input/output port
26	NC	--	Non connection	66	MCLK	I/O	6-bit input/output port
27	SEEK/STOP	I/O	8-bit input/output port	67	SW1	I	7-bit input/output port
28	NC	--	Non connection	68	PS2	I/O	7-bit input/output port
29	IFC	I	Inputs FM intermediate frequency counter	69	NC	--	Non connection
30	VddPLL	--	Positive power supply for PLL	70	STAGE	I/O	7-bit input/output port
31	OSC	I	Inputs PLL local band frequency	71	BLKCK	I/O	7-bit input/output port
32	NC	--	Non connection	72	RDSSCK	I/O	7-bit input/output port
33	GNDPLL	--	Ground for PLL	73	NC	--	Non connection
34	AMEO	O	Error output from charge pump of the PLL frequency synthesizer	74	REGCPU	--	CPU power supply regulator
				75	GND	--	Ground
35	FMEO	O	Error output from charge pump of the PLL frequency synthesizer	76	X2	--	System clock oscillation resonator connection
36	IC	--	Internally connected. Connected to GND or GNDPORT	77	X1	I	System clock oscillation resonator connection
37	SD/ST	I/O	8-bit input/output port	78	REGOSC	--	Oscillation regulator
38	RDSDA	I/O	8-bit input/output port	79	Vdd	--	Positive power supply
39	NC	--	Non connection	80	RESET	I	System reset input
40	NC	--	Non connection				

## ■ AN8806SB(IC501):RF&amp;Servo AMP

## 1.Terminol Layout

PD	1	36	PDAC
LD	2	35	PDBD
LDON	3	34	PDF
LDP	4	33	PDE
VCC	5	32	PDER
RF-	6	31	PDFR
RF OUT	7	30	TBAL
RF IN	8	29	FBAL
C.AGC	9	28	EF-
ARF	10	27	EF OUT
C.ENV	11	26	TE-
C.EA	12	25	TE OUT
CS BDO	13	24	CROSS
BDO	14	23	TE BPF
CS BRT	15	22	VDET
OFTR	16	21	LD OFF
/NRFDET	17	20	VREF
GND	18	19	ENV

## 2.Block Diagram



## 3. Functions

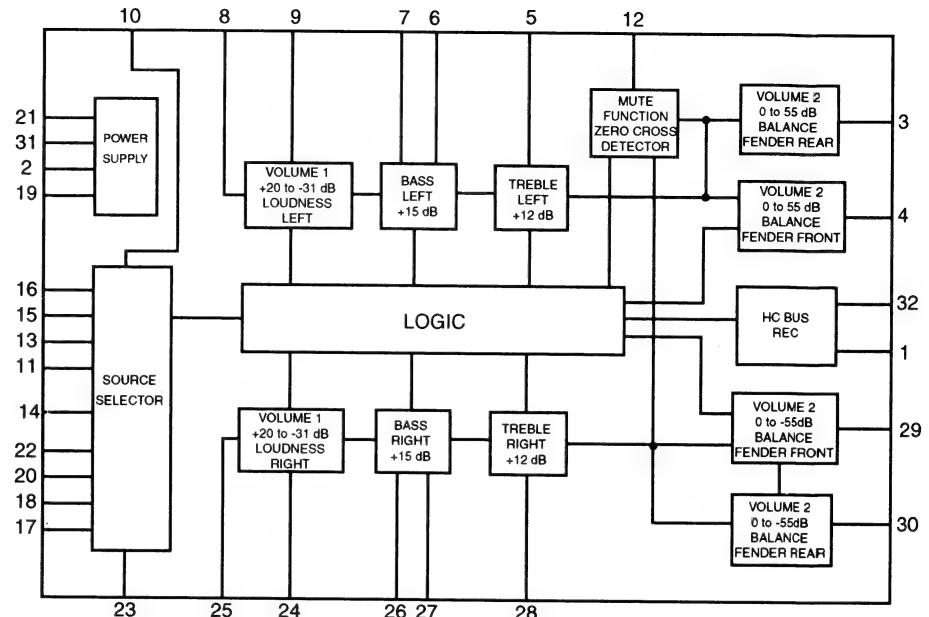
Pin No.	Symbol	I/O	Functions and operations
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connect to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RFamp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	I/O	F I-V amp gain control
32	PDER	I/O	E I-V amp gain control
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

## ■ TEA6320T-X(IC301) : E.VOLUME

## 1. Terminal Layout

SDA	1	32	SCL
GND	2	31	VCC
OUTLR	3	30	OUTRR
OUTLF	4	29	OUTRF
TL	5	28	TR
B2L	6	27	B2R
B1L	7	26	B1R
IVL	8	25	IVR
ILL	9	24	ILR
QSL	10	23	QSR
IDL	11	22	IDR
MUTE	12	21	Vref
ICL	13	CD-CH	20
IMD	14	19	ICR
IBL	15	TAPE	18
IAL	16	TUNER	17
			IAR

## 2. Block Diagram

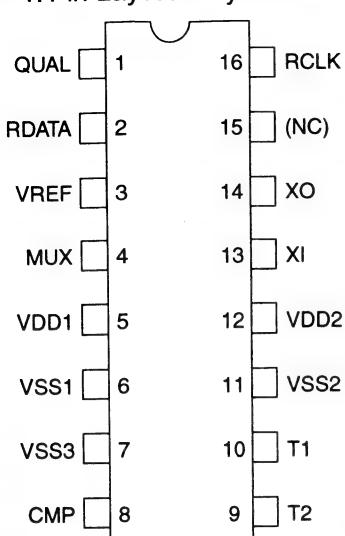


## 3. Pin Functions

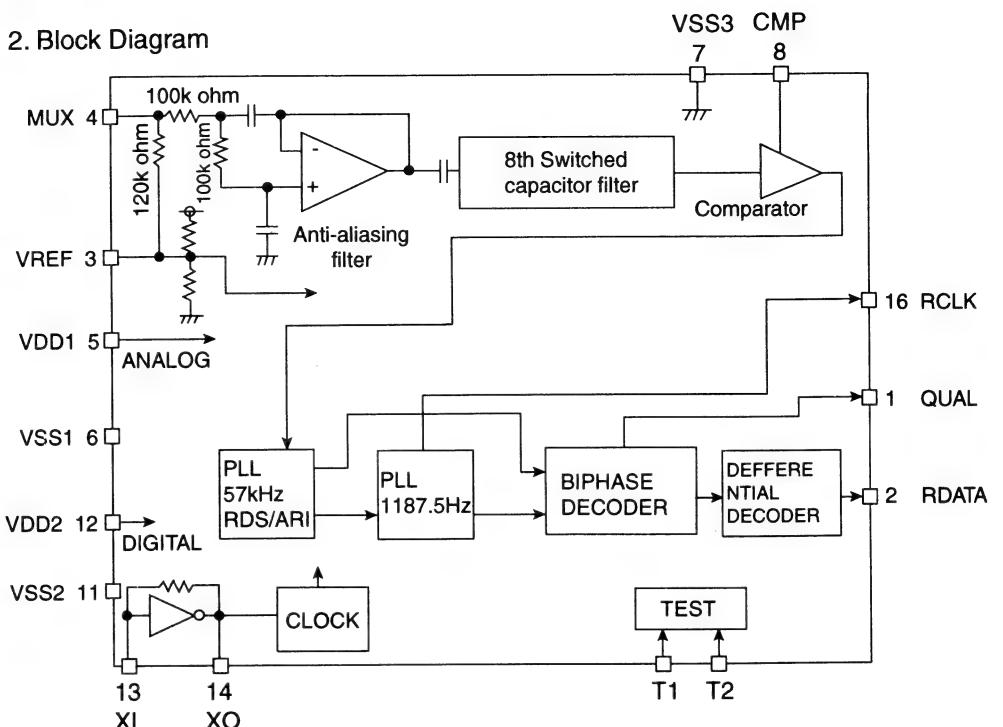
Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	SDA	I/O	Serial data input/output.	17	IAR	I	Input A right source.
2	GND	-	Ground.	18	IBR	I	Input B right source.
3	OUTLR	O	output left rear.	19	CAP	-	Electronic filtering for supply.
4	OUTLF	O	output left front.	20	ICR	I	Input C right source.
5	TL	I	Treble control capacitor left channel or input from an external equalizer.	21	Vref	-	Reference voltage (0.5Vcc)
6	B2L	-	Bass control capacitor left channel or output to an external equalizer.	22	IDR	-	Not used
7	B1L	-	Bass control capacitor left channel.	23	QSR	O	Output source selector right channel.
8	IVL	I	Input volume 1. left control part.	24	ILR	I	Input loudness right channel.
9	ILL	I	Input loudness. left control part.	25	IVR	I	Input volume 1. right control part.
10	QSL	O	Output source selector. left channel.	26	B1R	-	Bass control capacitor right channel
11	IDL	-	Not used	27	B2R	O	Bass control capacitor right channel or output to an external equalizer.
12	MUTE	-	Not used	28	TR	I	Treble control capacitor right channel or input from an external equalizer.
13	ICL	I	Input C left source.	29	OUTRF	O	Output right front.
14	IMD	-	Not used	30	OUTRR	O	Output right rear.
15	IBL	I	Input B left source.	31	Vcc	-	Supply voltage.
16	IAL	I	Input A left source.	32	SCL	I	Serial clock input.

## ■ BU1923F-X (IC761) : RDS

## 1. Pin Layout &amp; Symbol



## 2. Block Diagram

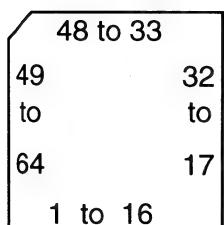


## 3. Pin Functions

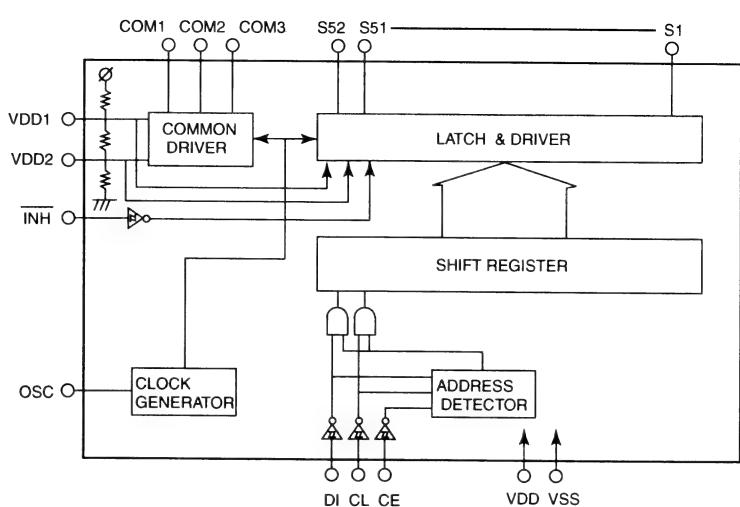
Pin No.	Symbol	Function
1	QUAL	Output signal quality Good: HI
2	RDATA	RDS data
3	VREF	1/2 Vdd1 reference
4	MUX	Input Composite
5	VDD1	Analog power supply
6	VSS1	Analog power supply
7	VSS3	Analog power supply
8	CMP	Comparator
9	T1	Test point
10	T2	Test point
11	VSS2	Digital power supply
12	VDD2	Digital power supply
13	XI	X'TAL oscillation in 4.332MHz
14	XO	X'TAL oscillation out 4.332MHz
15	(NC)	Non connection
16	RCLK	RDS clock 1187.5kHz

## ■ LC75823E(IC851):LCD DRIVER

## 1.Terminal Layout



## 2.Block Diagram

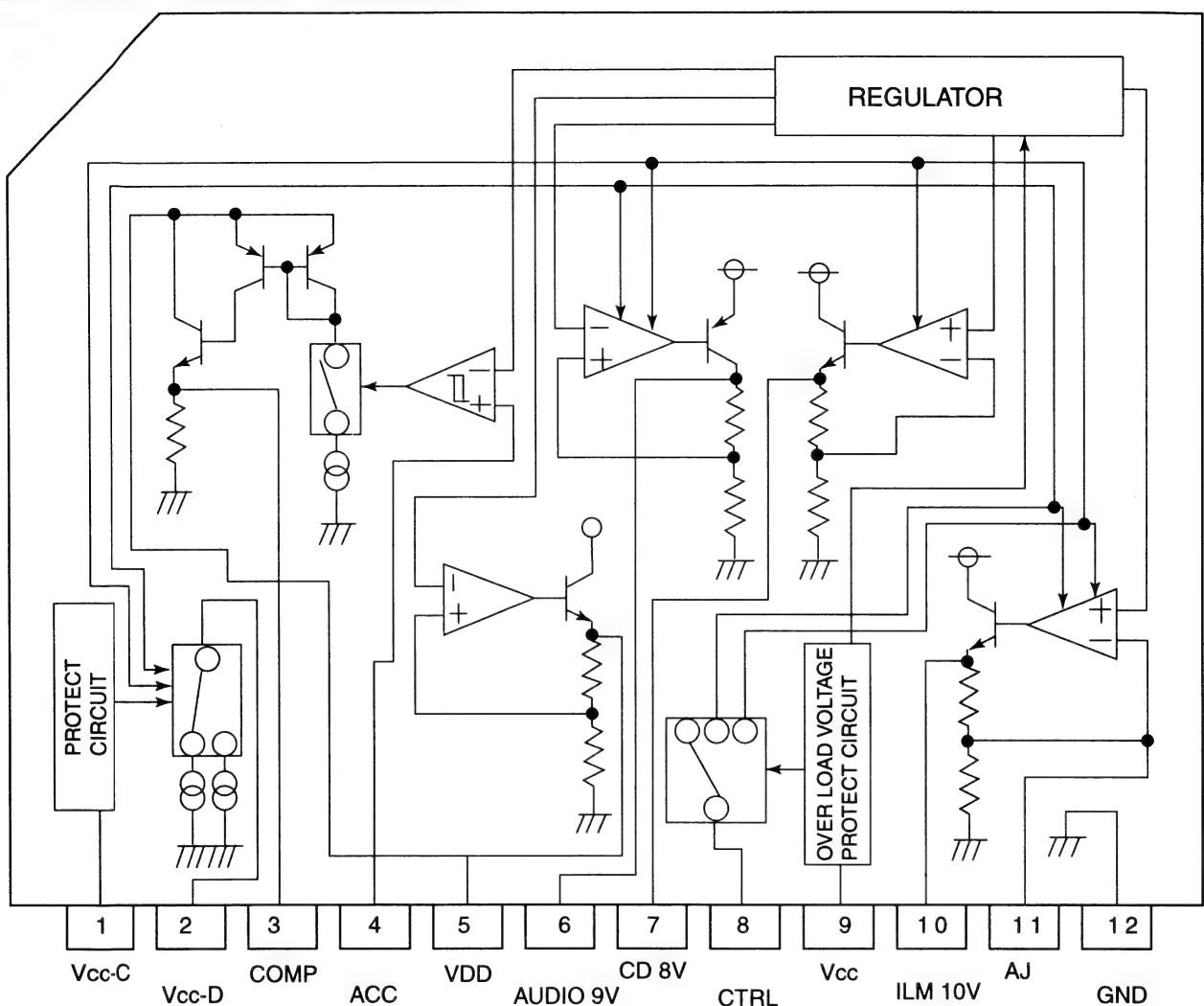


## 3.Pin Function

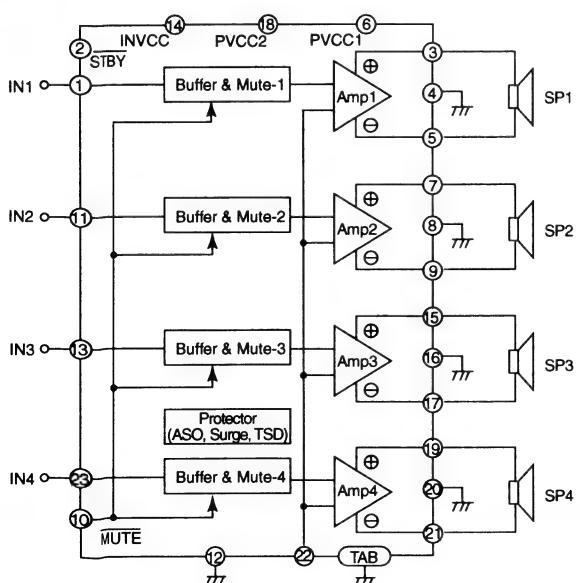
PIN No.	Symbol	I/O	Functions
1 to 9		-	NOT USED
10 to 52	S10 to S52	O	Segment outputs that display data transferred from serial data.
53 to 55	COM1 to COM3	O	The frame frequency (fo) for the common driver output is (fosc/384)Hz.
56	VDD	-	Power supply
57	/INH	I	Forcibly turns off the display. regardless of internal data. Serial data can be input. whether this pin is high or low
58		-	NOT USED
59		-	
60	VSS	-	To GND
61	OSC	I	Oscillator connection (for the common segment alternating waveform)
62	CE	I	Serial data transfer
63	CL	I	pins connected to a microprocessor.
64	DI	I	

CE : Chip enable  
 CL : Sync.clock  
 DI : Transfer data

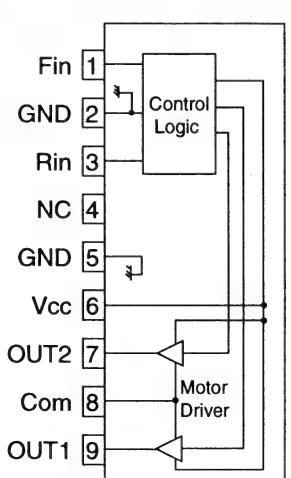
### ■ BA4901A-V3(IC901) : Regulator



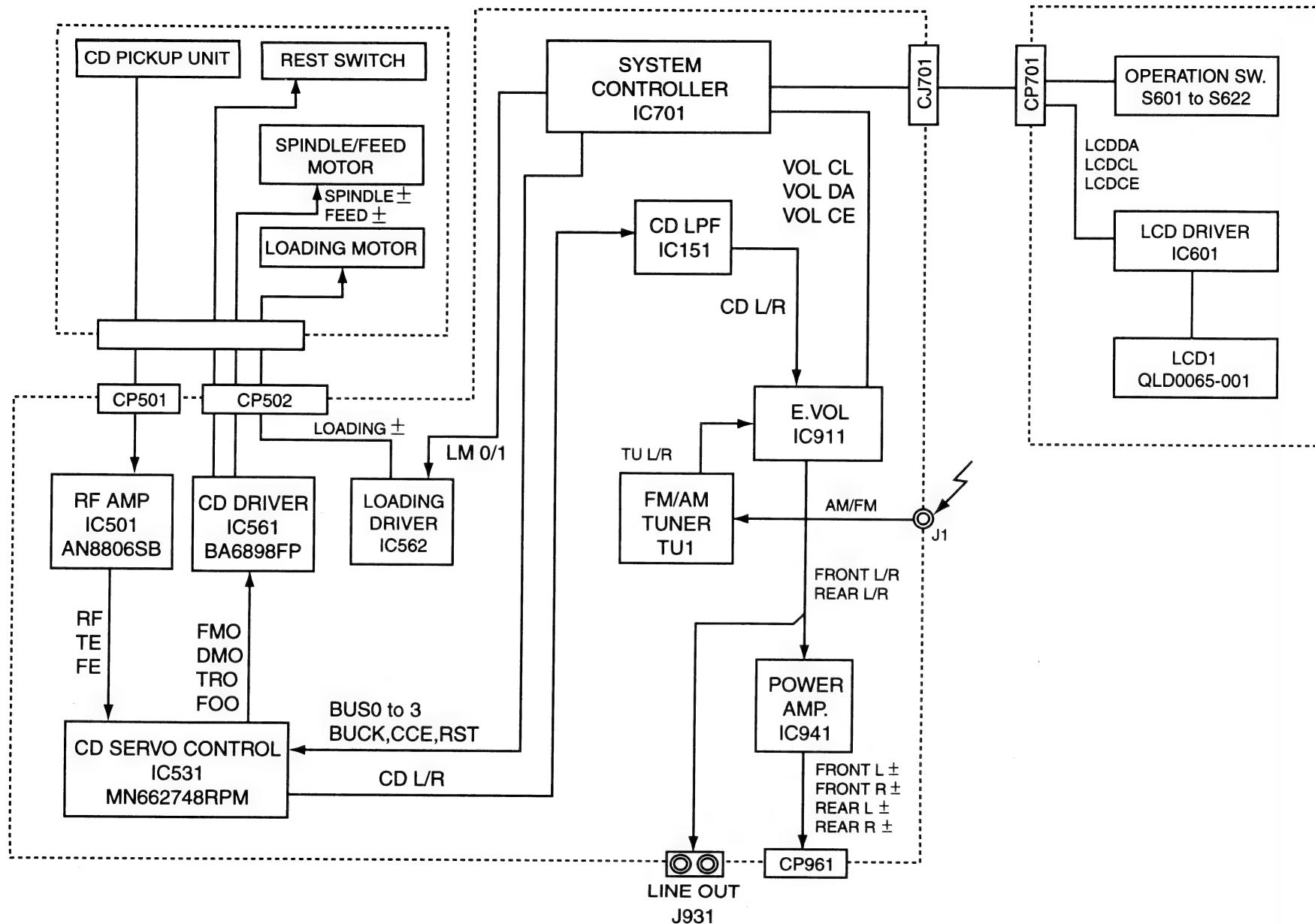
### ■ HA13158A(IC321) : BTL Amplifier



### ■ BA6218 (IC542) Loading Driver

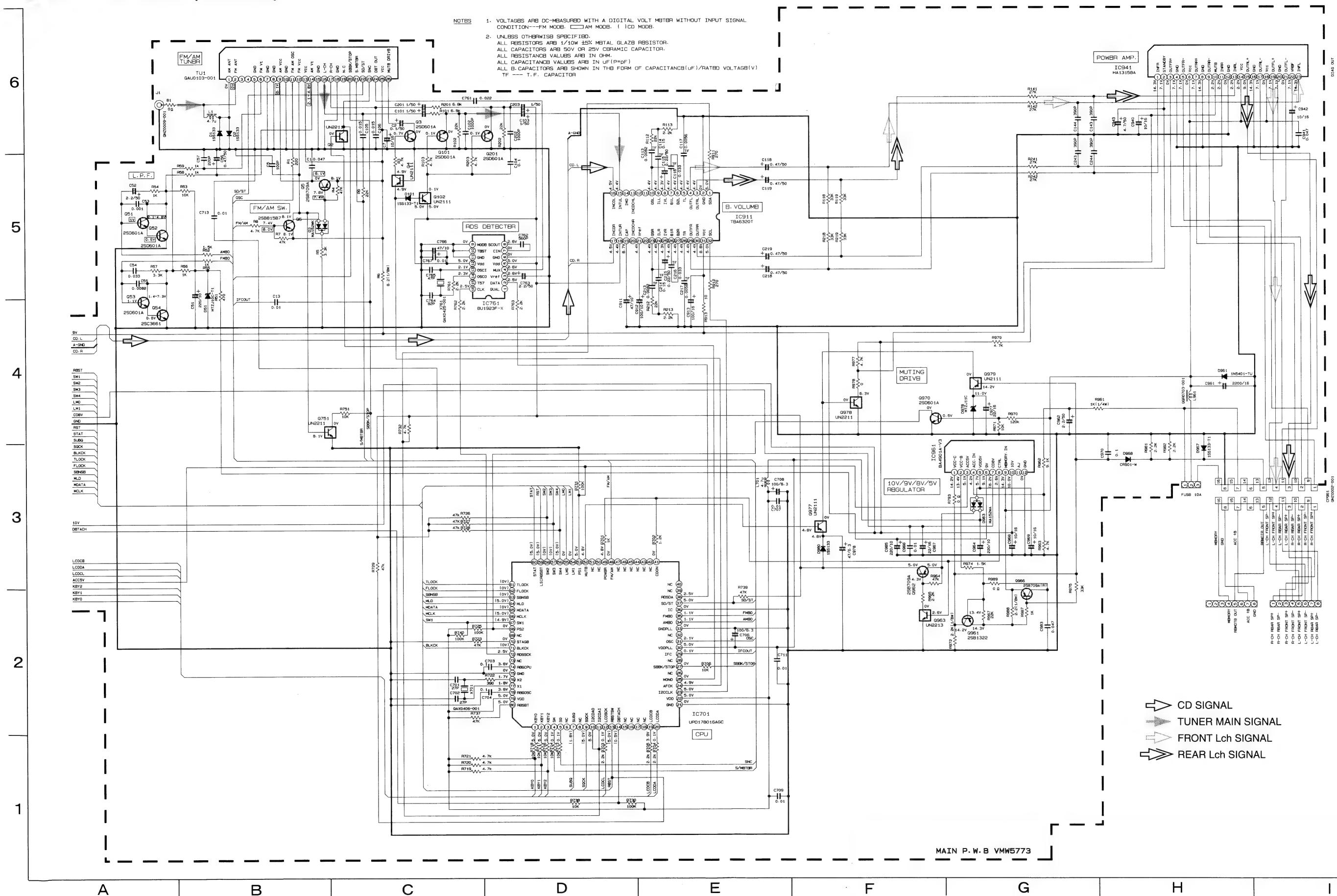


## Block Diagrams

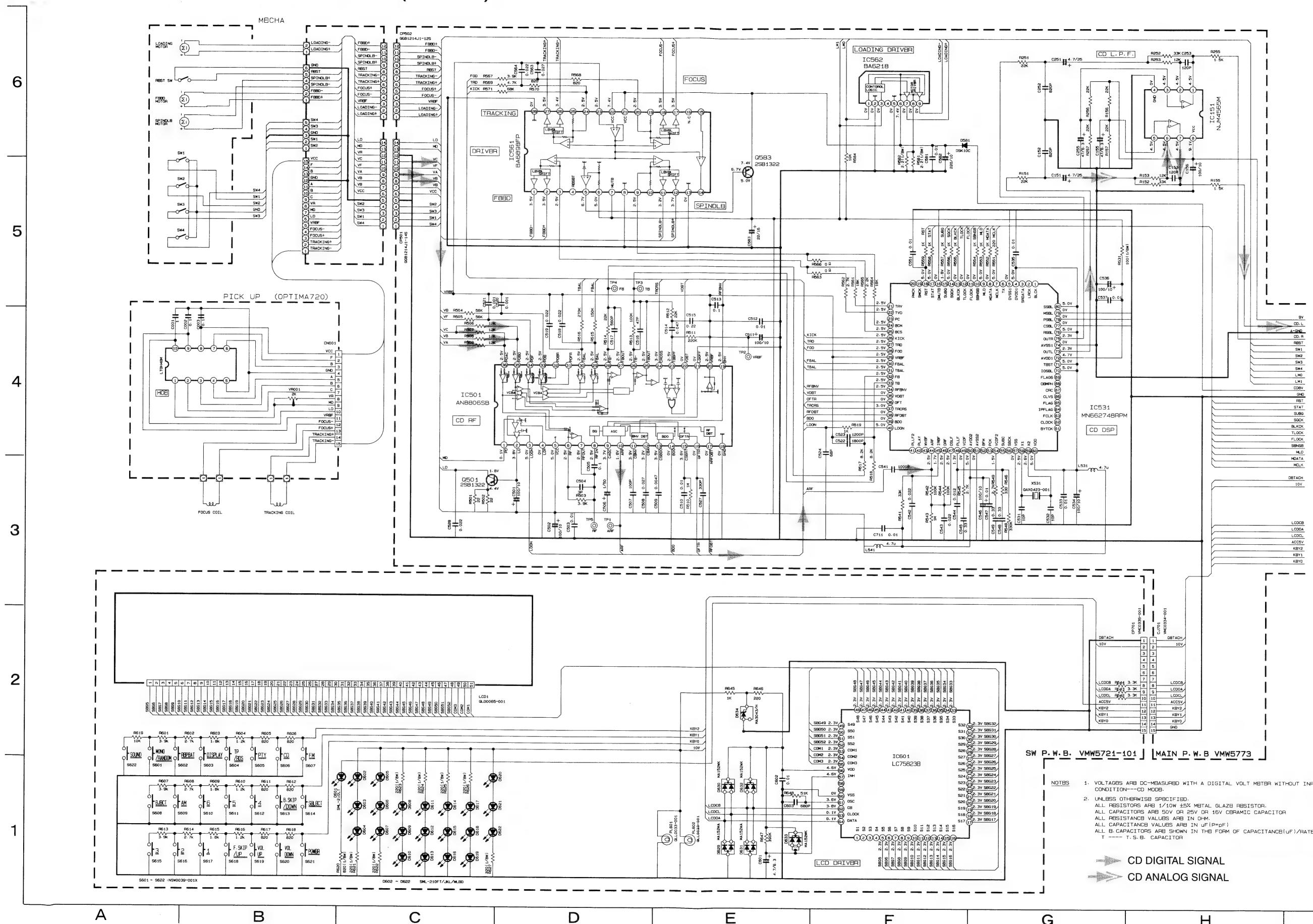


# Schematic Diagrams

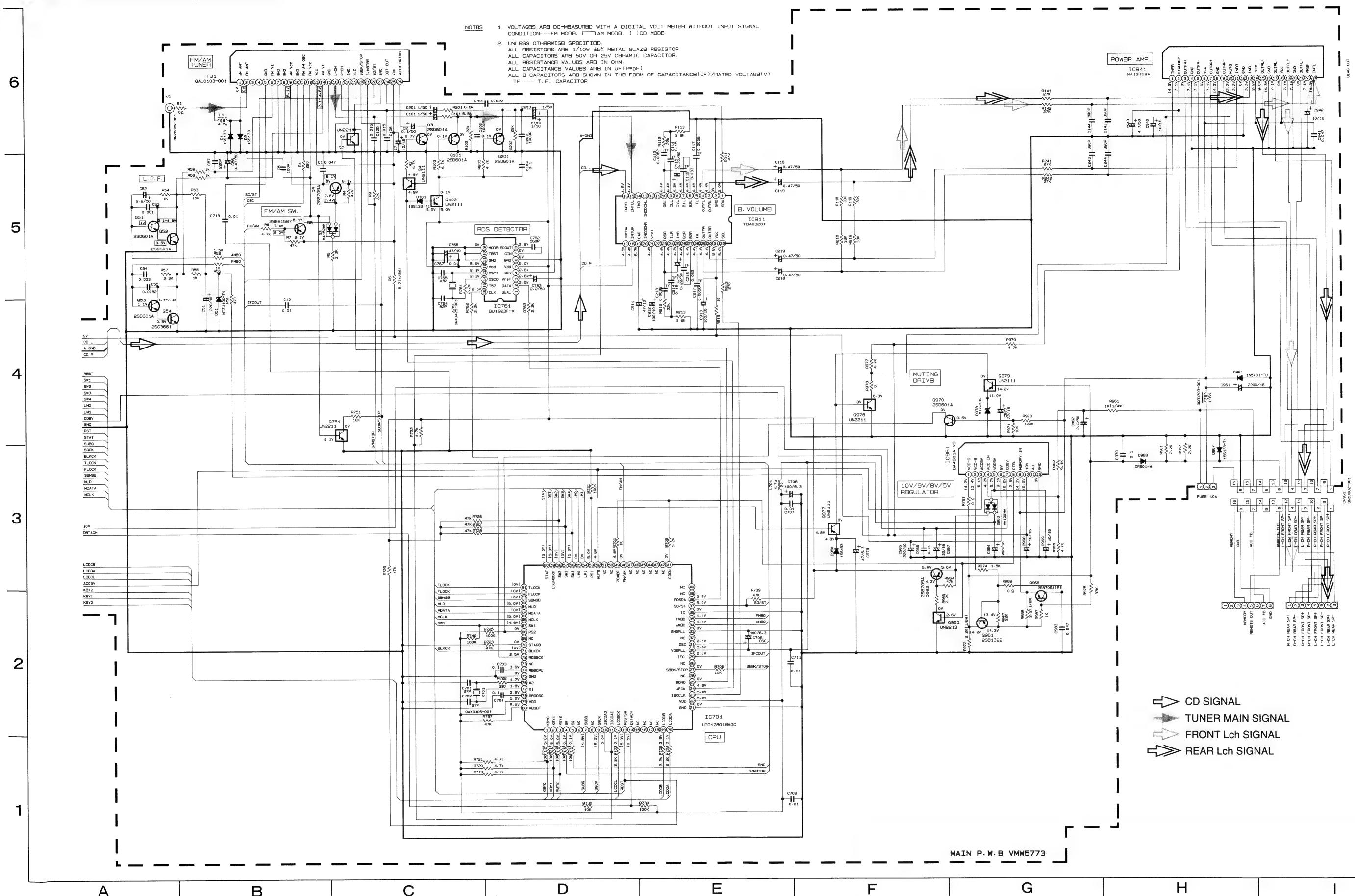
## ■ Main Circuit Section (KD-S656R)



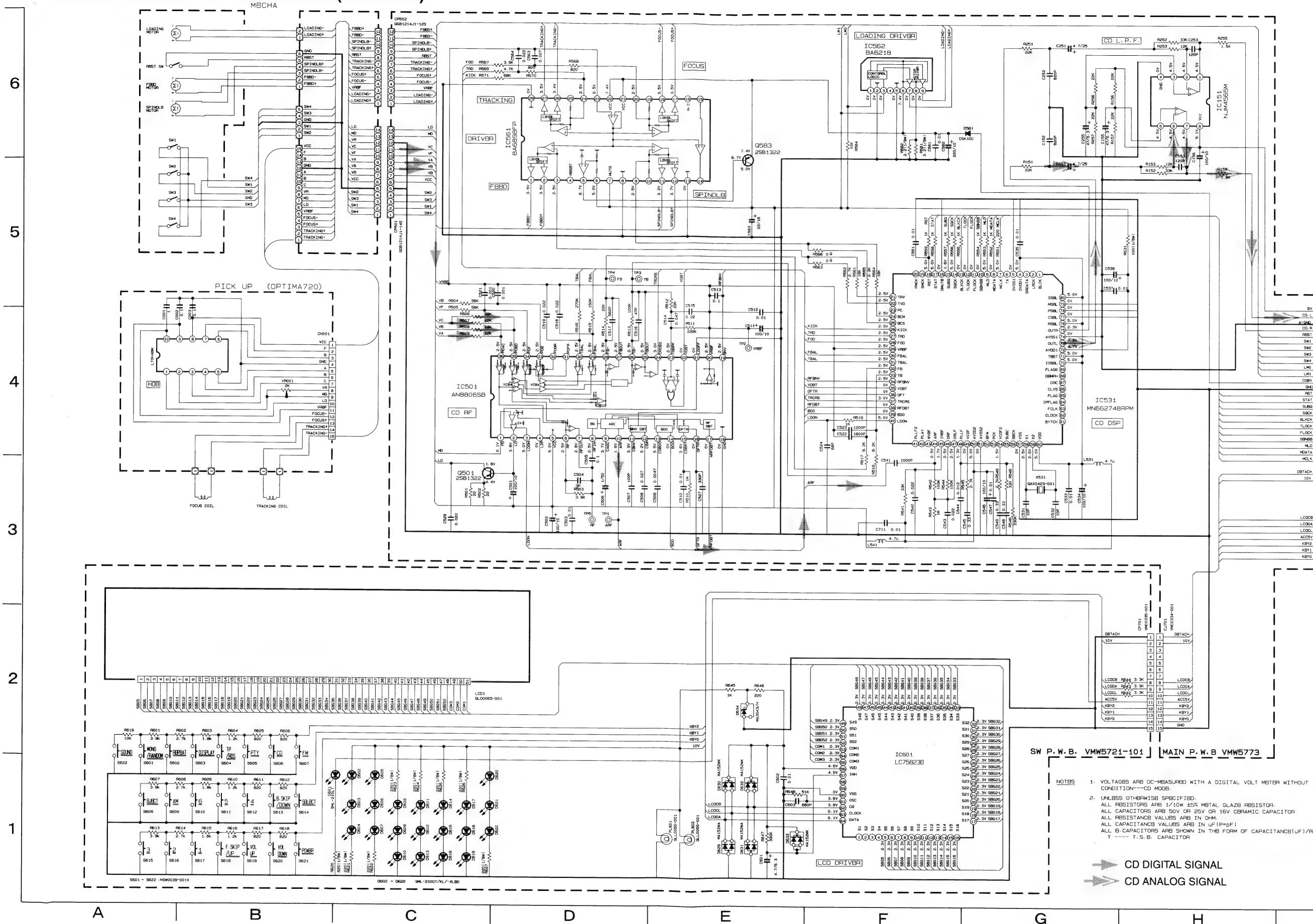
## ■ CD Servo Control Section &amp; LCD Driver Circuit (KD-S656R)



## ■ Main Circuit Section (KD-S653R)



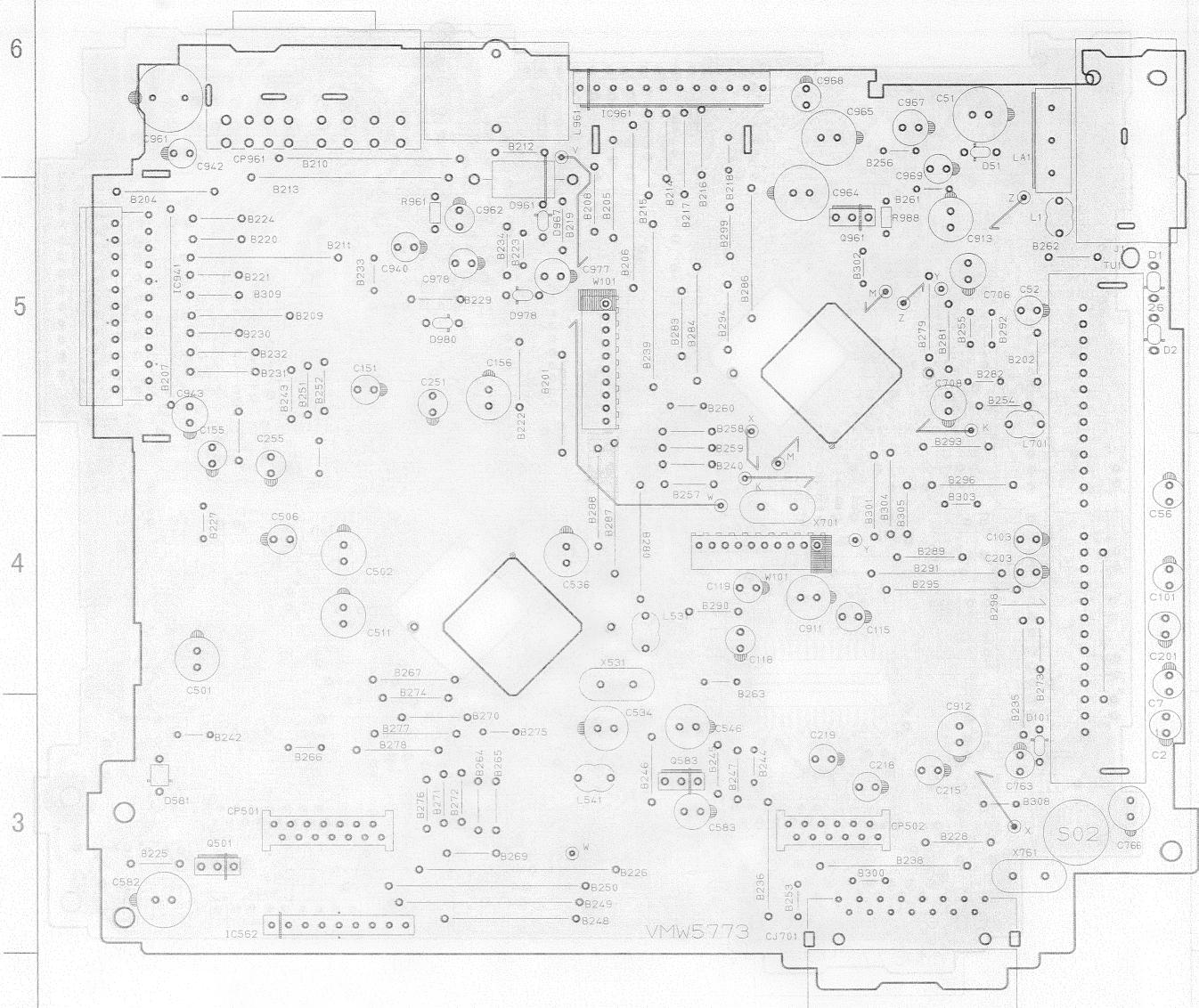
## ■ CD Servo Control &amp; LCD Driver Circuit (KD-S653R)



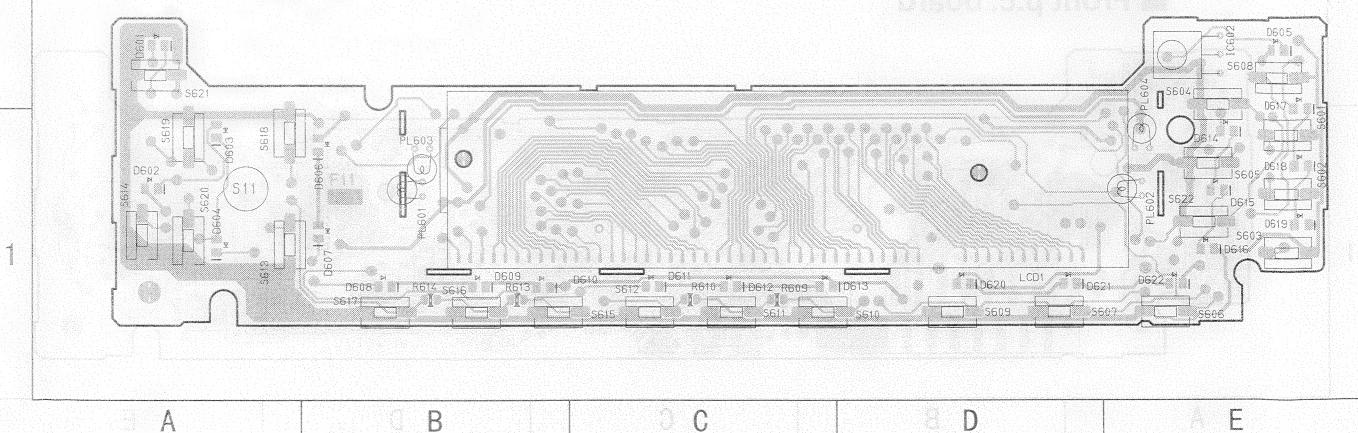
## Printed Circuit Boards

( Forward side )

### ■ Main p.c.board

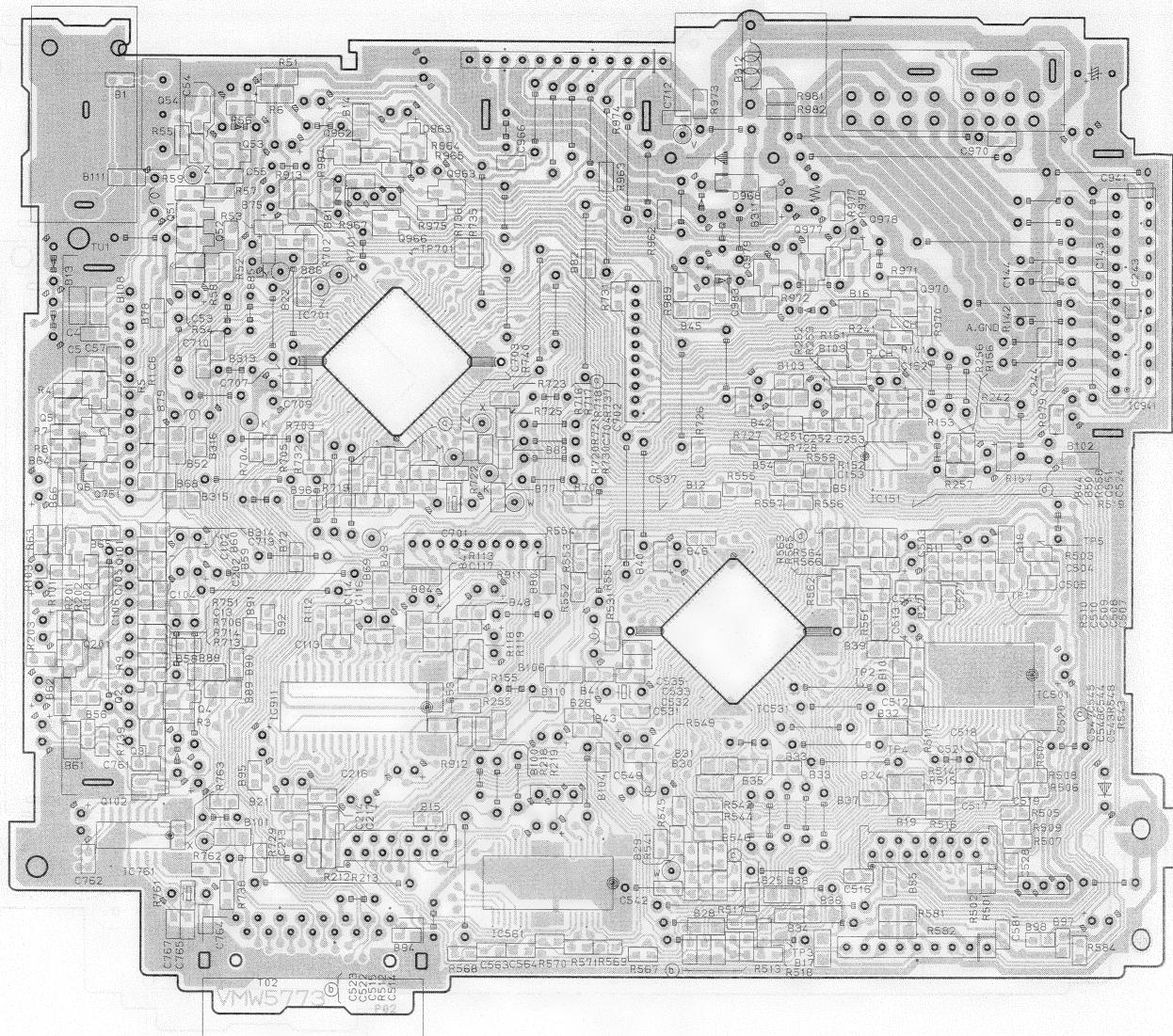


### ■ Front p.c. board

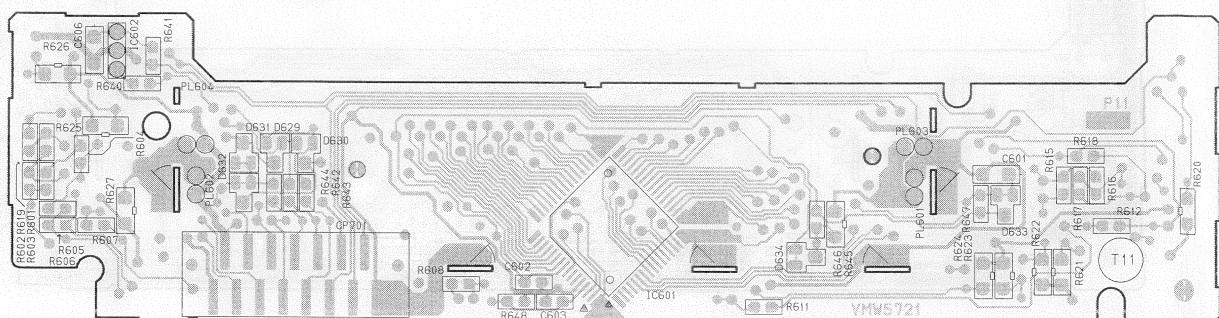


( Reverse side )

### ■ Main p.c.board



### ■ Front p.c. board



## PARTS LIST

[ KD-S656R KD-S653R ]

\* All printed circuit boards and its assemblies are not available as service parts.

Areas Suffix

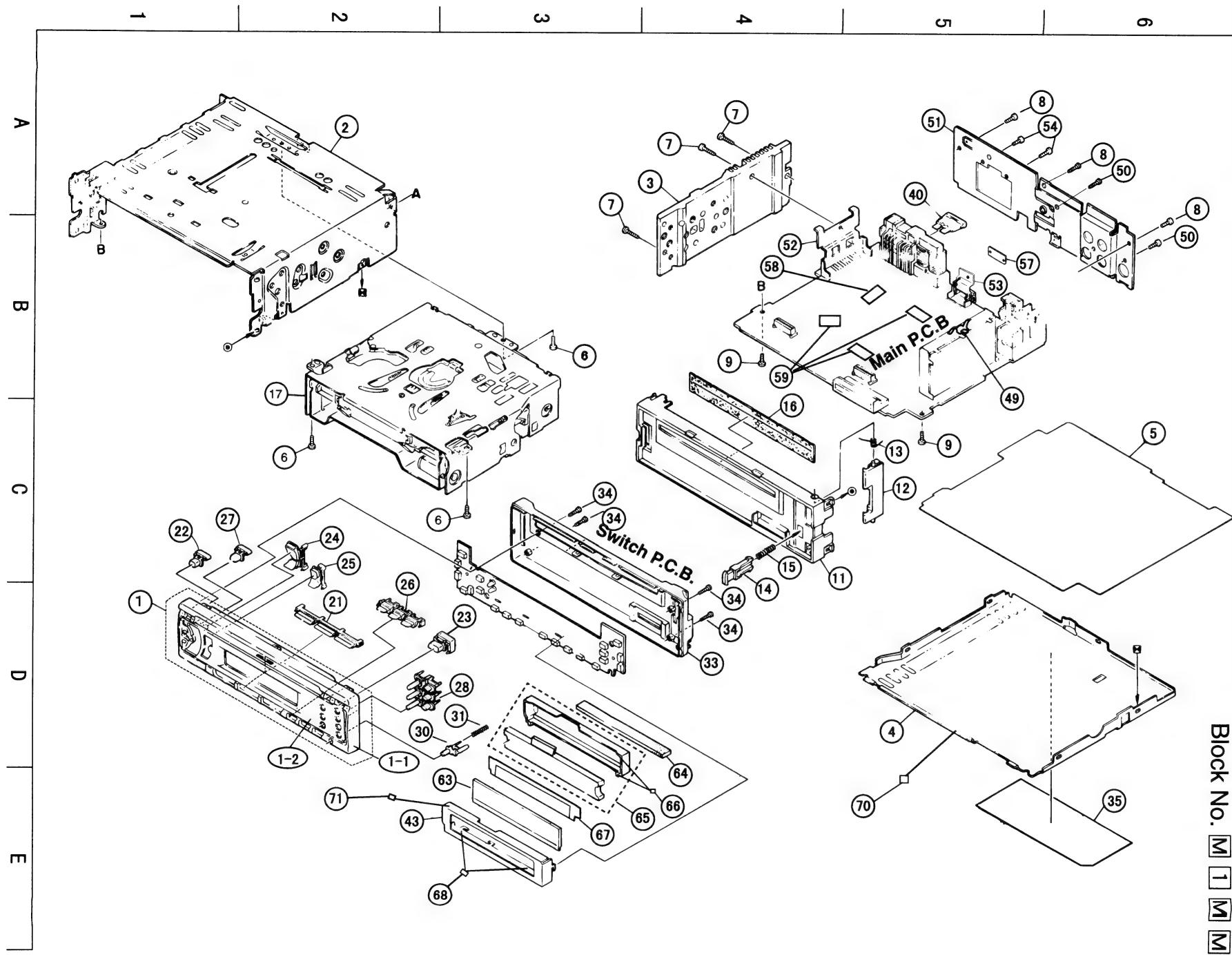
E ----- Continental Europe

### - Contents -

Exploded View of General Assembly and Parts List	3-2
CD Mechanism Ass'y and Parts List	3-4
Electrical Parts List	3-7
Packing Materials and Accessories Parts List	3-12

# General Exploded View and Parts List

Block No. **M** 1 **M** **M**



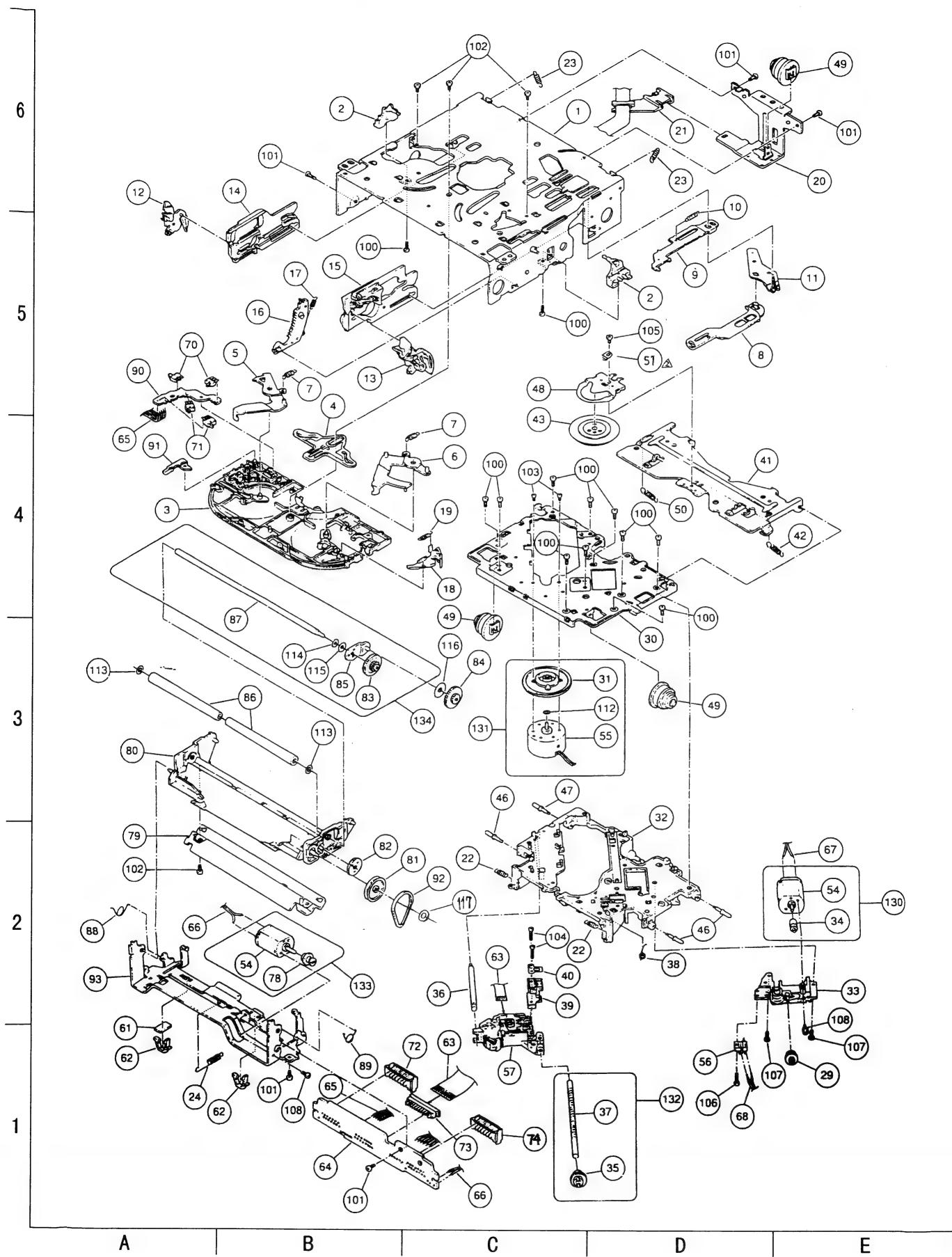
## ■ Parts List (General Assembly)

BLOCK NO. M1MM

▲	REF.	PARTS NO.	PARTS NAME	REMARKS	Q'TY	SUFFIX	CLR
	1	ZCKDS653R-NPA	NOSE PIECE	KD-S653R	1		
		ZCKDS656R-NPA	NOSE PIECE	KD-S656R	1		
	1-1	FSJC1034-002	FRONT PANEL		1		
	1-2	FSJD3010-00K	FINDER ASS'Y	KD-S653R	1		
		FSJD3010-00J	FINDER ASS'Y	KD-S656R	1		
	2	FSJC1029-024	TOP CHASSIS		1		
	3	FSMH3001-002	HEAT SINK		1		
	4	FSKM3011-001	BOTTOM COVER	CHASSIS+CD MECH	1		
	5	FSMA3004-003	INSULATOR	CHASSIS+REAR BK	1		
	6	QYSDST2604Z	SCREW	CHASSIS+MECHA	3		
	7	FSKZ4005-001	SCREW	SIDE PANEL+IC B	3		
	8	QYSDST2606Z	SCREW		3		
	9	QYSDST2606Z	SCREW		2		
	11	FSJC2010-002	FRONT CHASSIS		1		
	12	FSKS3004-202	LOCK LEVER		1		
	13	FSKW4005-003	TORSION SPRING		1		
	14	FSXP3026-002	RLS KNOB		1		
	15	FSKW3002-004	COMP. SPRING		1		
	16	FSPK3009-001	BLIND		1		
	17	-----	CD MECHA		1		
	21	FSXP2025-001	RESET BUTTON		1		
	22	FSXP3044-002	POWER BUTTON		1		
	23	FSXP3043-002	EJECT BUTTON		1		
	24	FSXP2033-001	+/- BUTTON		1		
	25	FSXP2026-002	UP/DOWN BUTTON	1/2/3/4/5/6	1		
	26	FSXP2029-002	D.FUNC BUTTON	KD-S656R	1		
		FSXP2029-013	D.FUNC BUTTON	KD-S653R	1		
	27	FSXP3040-003	SEL BUTTON	KD-S653R	1		
		FSXP3040-001	SEL BUTTON	KD-S656R	1		
	28	FSXP2030-001	PUSH BUT(SLANT)		1		
	30	FSXP3049-002	DETACH BUTTON	FOR DETACH BUTT	1		
	31	FSKW3002-008	COMP. SPRING		1		
	33	FSJC1035-002	REAR COVER		1		
	34	VKZ4777-001	MINI SCREW	FRONT+REAR	4		
	35	LV30989-001A	NAME PLATE	KD-S653R	1		
	40	LV30746-001A	NAME PLATE	KD-S656R	1		
	43	QMFZ021-100-J1	FUSE		1		
	49	FSYH3013-001	LCD CASE		1		
	50	VMA4652-001SS	EARTH PLATE		1		
		QYSDST2606Z	SCREW		2		
	51	FSKM3010-003	REAR BRACKET		1		
	52	FSKL4018-00A	IC BRACKET		1		
	53	FSKL4015-002	REG BRACKET		1		
	54	QYSDSP2606Z	SCREW		2		
	57	FSKL4014-002	HEAT SINK		1		
	58	VYSA1R4-060	SPACER		1		
	59	VYSA1R4-093	SPACER		3		
	63	QLD0065-001	LCD MODULE		1		
	64	QN20089-001	RUBBER CONNE		1		
	65	FSKS3007-00A	LENS CASE ASS'Y		1		
	66	FSYH4036-014	SHEET		2		
	67	FSYH4048-002	SHEET		1		
	68	FSYH4036-015	SHEET		2		
	70	FSYH4036-017	SHEET		1		
	71	FSYH4036-018	SHEET		1		

## CD Mechanism Ass'y and Parts List

Block No. M 2 M M



## ■ Parts List (CD Mechanism)

BLOCK NO. M2MM

A	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	30310101T	FRAME		1		
	2	30310103T	DANPER PIN		2		
	3	30310107T	UPPER PLATE		1		
	4	30310108T	SEL STOP PLATE		1		
	5	30310109T	SEL ARM (L)		1		
	6	30310110T	SEL ARM (R)		1		
	7	30310133T	S ARM SPRING		2		
	8	30310112T	TRIG LEVER		1		
	9	30310114T	TRIG PLATE		1		
	10	30310115T	TRIG PL SPRING		1		
	11	30310116T	TRIG ARM		1		
	12	30310117T	FIX ARM (L)		1		
	13	30310118T	FIX ARM (R)		1		
	14	30310119T	FIX PLATE (L)		1		
	15	30310120T	FIX PLATE (R)		1		
	16	30310121T	LDG GEAR (6)		1		
	17	30310122T	LDG GEAR (6)SP		1		
	18	30310124T	S.L ARM		1		
	19	30310125T	S.L ARM SPRING		1		
	20	30310126T	REAR DAM BKT(J)		1		
	21	30310127T	FPC GUIDE		1		
	22	30310128T	HUNG UP SP (F)		2		
	23	30310129T	HUNG UP SP (R)		2		
	24	30310130T	LEVEL SPRING		1		
	29	30300510T	PU GEAR(B)		1		
	30	30310501T	TTB		1		
	31	-----	TURN TABLE		1		
	32	30310503T	FMB		1		
	33	30310504T	FD GR BRACKET		1		
	34	-----	FD GEAR (A)		1		
	35	-----	FD GEAR (C)		1		
	36	30310538T	PU SHAFT		1		
	37	-----	FD SCREW		1		
	38	30310510T	THRUST SPRING		1		
	39	30310511T	PU M NUT		1		
	40	30310512T	NUT PUSH SPR PL		1		
	41	30310513T	CLP ARM		1		
	42	30310514T	CLP ARM SPRING		1		
	43	30310515T	CLAMPER		1		
	46	30310521T	LOCK PIN		3		
	47	30310522T	LOCK PIN BL		1		
	48	30310523T	CLAMPER PLATE		1		
	49	30310524T	DAMPER (J)		3		
	50	30310525T	CLP ARM SPR (L)		1		
	51	30310536T	STOPPER SPRING		1		
	54	-----	FEED MOTOR		1		
	55	-----	FEED MOTOR		1		
	56	64180404T	SPINDLE MOTOR		1		
	57	OPTIMA-720A1	DET SWITCH		1		
	61	11050210T	CD PICK UNIT		1		
	62	19501403T	FELT		2		
	63	30311019T	WIRE CLAMPER		1		
	64	30311018T	PICK UP FPC(J)		1		
			CONNECTER PCBC(J)				

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REF.	PARTS NO.	PARTS NAME	REMARKS	Q'TY	SUFFIX	CLR
65	30311022T	WIRE (5P-J)		1		
66	30311023T	WIRE (LD-J)		1		
67	30311006T	WIRE (FD)		1		
68	30311007T	WIRE (RS)		1		
70	64180402T	DET SWITCH		2		
71	64180403T	DET SWITCH		2		
72	68150235T	CONNECTOR		1		
73	68170224T	CONNECTOR(15P)		1		
74	68150237T	CONNECTOR(12P)		1		
78	-----	LDG PULLEY		1		
79	30311105T	SUPPORT PLATE		1		
80	30311108T	GR MT BLK		1		
81	30311109T	LDG GEAR (2)		1		
82	30311110T	LDG GEAR (3)		1		
83	-----	LDG GEAR (4)		1		
84	30311112T	LDG GEAR (5)		1		
85	-----	LDG GR ARM		1		
86	30311131T	LDG ROLLER		2		
87	-----	LDG RLR SHAFT		1		
88	30311118T	L.P SPRING (L)		1		
89	30311119T	L.P SPRING (R)		1		
90	30311123T	SW PCB		1		
91	30311124T	SW ACTUATOR		1		
92	30311129T	LDG BELT		1		
93	30311130T	FRONT BRKT (J)		1		
100	9C0620503T	C B TAP SCREW		11		
101	9C2020401T	C SCREW TS.G		5		
102	9C4320403T	C B TAP SCREW		4		
103	9C0117223T	SCREW		2		
104	9C0317803T	C SCREW		2		
105	9C4220201T	C TAP SCREW S3		1		
106	9C4420003T	C TAP SCREW B3		1		
107	9C4420503T	C TAP SCREW B3		2		
108	9P0220031T	TAMS SCREW		2		
112	-----	POLY WASHER		1		
113	9W0330276T	POLY WASHER		2		
114	-----	WAVE WASHER		1		
115	-----	LUMILAR WASHER		1		
116	9W0725030T	LUMILAR W		1		
117	9W0640030T	WASHER		1		
130	303105301T	FFED MOTOR ASSY	NO.34,54	1		
131	303105302T	SP MOTOR ASSY	NO.31,55,112	1		
132	303105303T	FEED SCREW ASSY	NO.35,37	1		
133	303111301T	LDG MOTOR ASSY	NO.54,78	1		
134	303111302T	RDG RLR SFT ASY	NO.83,85,87	1		

# Electrical Parts List

KD-S656R/KD-S653R

## Main P. C. B.

BLOCK NO. 01 11111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 942	QER41CM-106	E CAPACITOR	.10MF 20% 16V	
C 943	QER41HM-475	E CAPACITOR	4.7MF 20% 50V	
Q 966	2SB709A/R/-X	TRANSISTOR		
B 315	NRS181J-OROX	MG RESISTOR	5% 1/8W	
C 1	NCB21EK-473X	C CAPACITOR	.047MF 10% 25V	
C 2	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
C 5	NCS21HJ-101X	C CAPACITOR	1000PF 5% 50V	
C 7	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 13	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 51	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 52	QER41HM-225	E CAPACITOR	2.2MF 20% 50V	
C 53	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
C 54	NCB21HK-333X	C CAPACITOR	.033MF 10% 50V	
C 55	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
C 56	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 57	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
C 101	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 102	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
C 103	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 104	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 105	NCB21HK-153X	C CAPACITOR	.015MF 10% 50V	
C 106	NCB21HK-153X	C CAPACITOR	.015MF 10% 50V	
C 113	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
C 114	NCB21CK-154X	C CAPACITOR	.15MF 10% 16V	
C 115	QEK41HM-224	E CAPACITOR	.22MF 20% 50V	
C 116	NCB21EK-333X	C CAPACITOR	.033MF 10% 25V	
C 117	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
C 118	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 119	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 143	NCS21HJ-391X	C CAPACITOR	390PF 5% 50V	
C 144	NCS21HJ-391X	C CAPACITOR	390PF 5% 50V	
C 151	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 152	NCS21HJ-821X	C CAPACITOR	820PF 5% 50V	
C 153	NCS21HJ-121X	C CAPACITOR	120PF 5% 50V	
C 155	QEKOJHM-476Z	E CAPACITOR	47MF 20% 6.3V	
C 156	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
C 201	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 202	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
C 203	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 213	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
C 214	NCB21CK-154X	C CAPACITOR	.15MF 10% 16V	
C 215	QEK41HM-224	E CAPACITOR	.22MF 20% 50V	
C 216	NCB21EK-333X	C CAPACITOR	.033MF 10% 25V	
C 217	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
C 218	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 219	QEK41HM-474	E CAPACITOR	.47MF 20% 50V	
C 243	NCS21HJ-391X	C CAPACITOR	390PF 5% 50V	
C 244	NCS21HJ-391X	C CAPACITOR	390PF 5% 50V	
C 251	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 252	NCS21HJ-821X	C CAPACITOR	820PF 5% 50V	
C 253	NCS21HJ-121X	C CAPACITOR	120PF 5% 50V	
C 255	QEKOJHM-476Z	E CAPACITOR	47MF 20% 6.3V	
C 501	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 502	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 503	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	

BLOCK NO. 01 11111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 504	NCS21HJ-3R0X	C CAPACITOR	3.0PF 5% 50V	
C 505	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 506	QEK41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 507	NCS21HJ-101X	C CAPACITOR	100PF 5% 50V	
C 508	NCB21HK-273X	C CAPACITOR	.027MF 10% 50V	
C 509	NCB21HK-472X	C CAPACITOR	4700PF 10% 50V	
C 510	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 511	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
C 512	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 513	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 514	NCB21EK-473X	C CAPACITOR	.047MF 10% 25V	
C 515	NCB21CK-224X	C CAPACITOR	.22MF 10% 16V	
C 516	NCS21HJ-470X	C CAPACITOR	47PF 5% 50V	
C 517	NCS21HJ-561X	C CAPACITOR	.560PF 5% 50V	
C 518	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 519	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 520	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
C 521	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
C 522	NCB21HK-182X	C CAPACITOR	1800PF 10% 50V	
C 523	NCB21HK-122X	C CAPACITOR	1200PF 10% 50V	
C 524	NCS21HJ-680X	C CAPACITOR	.68PF 5% 50V	
C 527	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
C 528	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 531	NDC21HJ-100X	C CAPACITOR		
C 532	NDC21HJ-100X	C CAPACITOR		
C 533	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 534	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 535	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 536	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 537	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 541	NCS21HJ-102X	C CAPACITOR	1000PF 5% 50V	
C 542	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 543	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 544	NCB21HK-123X	C CAPACITOR	.012MF 10% 50V	
C 545	NCB21CK-334X	C CAPACITOR	.33MF 10% 16V	
C 546	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 547	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 548	NCB21CK-334X	C CAPACITOR	.33MF 10% 16V	
C 549	NCB21CK-334X	C CAPACITOR	.33MF 10% 16V	
C 551	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 563	NCB21HK-273X	C CAPACITOR	.027MF 10% 50V	
C 564	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
C 581	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 582	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 583	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C 701	NDC21HJ-270X	C CAPACITOR		
C 702	NDC21HJ-270X	C CAPACITOR		
C 703	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 704	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 706	QEKOJHM-107Z	E CAPACITOR	100MF 20% 6.3V	
C 707	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 708	QEKOJHM-107Z	E CAPACITOR	100MF 20% 6.3V	
C 709	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 710	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 713	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	

BLOCK NO. 0111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 761	NCB21EK-223X	C CAPACITOR	.022MF 10% 25V	
C 762	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
C 763	QEK41HM-225	E CAPACITOR	2.2MF 20% 50V	
C 764	NDC21HJ-820X	C CAPACITOR		
C 765	NDC21HJ-470X	C CAPACITOR		
C 766	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 767	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 911	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
C 912	QER41AM-107	E CAPACITOR	100MF 20% 10V	
C 913	QEJK1CM-107Z	E CAPACITOR	100MF 20% 16V	
C 940	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 941	NCB21EK-473X	C CAPACITOR	.047MF 10% 25V	
C 961	QE20337-228	E CAPACITOR	2200MF	
C 962	QER41HM-225	E CAPACITOR	2.2MF 20% 50V	
C 964	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 965	QER41AM-227	E CAPACITOR	220MF 20% 10V	
C 966	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
C 967	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
C 968	QER41CM-106	E CAPACITOR	10MF 20% 16V	
C 969	QEJK1CM-106	E CAPACITOR	10MF 20% 16V	
C 970	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
C 977	QER41CM-226	E CAPACITOR	22MF 20% 16V	
C 978	QEJKQJM-476Z	E CAPACITOR	47MF 20% 6.3V	
C 983	NCB21EK-473X	C CAPACITOR		
CJ701	QGZ1601J1-15	DETACHABLE CONN		
CP501	QGB1214J1-14S	B TO B CONNE		
CP502	QGB1214J1-12S	B TO B CONNE		
CP961	QN20002-001	16P CONNECTOR		
D 1	1SS133-T1	SI DIODE		
D 2	1SS133-T1	SI DIODE		
D 3	MA152WK-X	SI DIODE		
D 51	MTZJ10C-T1	ZENER DIODE		
D 101	1SS133-T1	SI DIODE		
D 581	DSK10C-T1	DIODE		
D 961	1N5401-TU-15	DIODE		
D 963	MA152WA-X	DIODE		
D 967	1SS133-T1	SI DIODE		
D 968	CRS01-W	SB DIODE		
D 978	MTZJ11C-T1	ZENER DIODE		
D 980	1SS133-T1	SI DIODE		
IC151	NJM4565M-W	IC		
IC501	AN8806SB-W	IC C.M		
IC531	MN662748RPM	IC		
IC561	BA6898FP-X	IC		
IC562	BA6218	IC		
IC701	UPD178016AGC530	IC		
IC761	BU1923F-X	IC		
IC911	TEA6320T-X	IC		
IC941	HA13158A	IC		
IC961	BA4901A-V3	IC		
J 1	QN20009-001	CAR ANT JACK		
L 1	QQL244J-4R7Z	INDUCTOR		
L 531	QQL244J-4R7Z	INDUCTOR		
L 541	QQL244J-4R7Z	INDUCTOR		
L 701	QQL244J-4R7Z	INDUCTOR		

BLOCK NO. 0111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
L 961	QQR0703-001	CHOKE COIL		
Q 2	UN2211-X	TRANSISTOR		
Q 3	2SD601A/R/-X	TRANSISTOR		
Q 4	UN2111-X	TRANSISTOR		
Q 5	2SB709A/R/-X	TRANSISTOR		
Q 6	2SB815/7/-X	TRANSISTOR		
Q 51	2SD601A/R/-X	TRANSISTOR		
Q 52	2SD601A/R/-X	TRANSISTOR		
Q 53	2SD601A/R/-X	TRANSISTOR		
Q 54	2SC3661-X	TRANSISTOR		
Q 101	2SD601A/R/-X	TRANSISTOR		
Q 102	UN2111-X	TRANSISTOR		
Q 201	2SD601A/R/-X	TRANSISTOR		
Q 501	2SB1322/RS/-T	TRANSISTOR		
Q 583	2SB1322/RS/-T	TRANSISTOR		
Q 751	UN2211-X	TRANSISTOR		
Q 961	2SB1322/RS/-T	TRANSISTOR		
Q 962	2SB709A/R/-X	TRANSISTOR		
Q 963	UN2213-X	TRANSISTOR		
Q 970	2SD601A/R/-X	TRANSISTOR		
Q 977	UN2111-X	TRANSISTOR		
Q 978	UN2211-X	TRANSISTOR		
Q 979	UN2111-X	TRANSISTOR		
R 3	NRA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 4	NRA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 5	NRA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 6	NRS181J-8R2X	MG RESISTOR	8.2 5% 1/8W	
R 7	NRA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 8	NRA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 9	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 51	NRS181J-471X	MG RESISTOR	470 5% 1/8W	
R 52	NRA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 53	NRA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 54	NRA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 55	NRA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 56	NRA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 57	NRA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 58	NRA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 59	NRA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 101	NRA02J-682X	MG RESISTOR	6.8K 5% 1/10W	
R 102	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 103	NRA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 112	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 113	NRA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 118	NRA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 119	NRA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 141	NRA02J-273X	MG RESISTOR	27K 5% 1/10W	
R 142	NRA02J-273X	MG RESISTOR	27K 5% 1/10W	
R 151	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 152	NRA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 153	NRA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 155	NRA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 156	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 157	NRA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 201	NRA02J-682X	MG RESISTOR	6.8K 5% 1/10W	

BLOCK NO. 01

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 202	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 203	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 212	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 213	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 218	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 219	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 241	NRSA02J-273X	MG RESISTOR	27K 5% 1/10W	
R 242	NRSA02J-273X	MG RESISTOR	27K 5% 1/10W	
R 251	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 252	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 253	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 255	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 256	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 257	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 501	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
R 502	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
R 503	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 504	NRSA02J-563X	MG RESISTOR	56K 5% 1/10W	
R 505	NRSA02J-563X	MG RESISTOR	56K 5% 1/10W	
R 506	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 507	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 508	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 509	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
R 510	NRSA02J-105X	MG RESISTOR	1.0M 5% 1/10W	
R 511	NRSA02J-224X	MG RESISTOR	220K 5% 1/10W	
R 512	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 513	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 514	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 515	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
R 516	NRSA02J-274X	MG RESISTOR	270K 5% 1/10W	
R 517	NRSA02J-822X	MG RESISTOR	8.2K 5% 1/10W	
R 518	NRSA02J-822X	MG RESISTOR	8.2K 5% 1/10W	
R 519	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 531	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
R 541	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
R 542	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 543	NRSA02J-105X	MG RESISTOR	1.0M 5% 1/10W	
R 544	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 545	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 546	NRSA02J-331X	MG RESISTOR	330 5% 1/10W	
R 548	NRSA02J-334X	MG RESISTOR	330K 5% 1/10W	
R 549	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 551	NRSA02J-221X	MG RESISTOR	220 5% 1/10W	
R 552	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 553	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 554	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 555	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 556	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 557	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 558	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 559	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 561	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
R 562	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 564	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
R 565	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 567	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 568	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 569	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 570	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 571	NRSA02J-683X	MG RESISTOR	68K 5% 1/10W	
R 581	NRSA181J-2R2X	MG RESISTOR	2.2 5% 1/8W	
R 582	NRSA181J-2R2X	MG RESISTOR	2.2 5% 1/8W	
R 584	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 701	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
R 702	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
R 703	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 704	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 705	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 706	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 713	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 714	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 716	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 717	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 718	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 719	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 720	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 721	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 722	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
R 723	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 725	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 726	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 727	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 728	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 729	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 730	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 731	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
R 732	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 737	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 738	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 739	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 740	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 751	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 761	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 762	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 763	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 911	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 912	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
R 913	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
R 961	QRZ02125-102X	C RESISTOR	1.0K 1/1W	
R 962	NRSA02J-912X	RES. C.M	9.1K 5% 1/10W	
R 963	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
R 964	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
R 965	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
R 967	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
R 970	NRSA02J-124X	MG RESISTOR	120K 5% 1/10W	
R 971	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 972	NRSA181J-222X	MG RESISTOR	2.2K 5% 1/8W	
R 974	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
R 975	NRSA02J-333X	MG RESISTOR	1.0K 5% 1/10W	
R 977	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	

## ■ Switch P. C. B.

BLOCK NO. <del>RELE</del> 1111111					
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 601	NBE20JM-475X	TS E CAPACITOR			
C 602	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V		
C 603	NCS21HJ-681X	C CAPACITOR	680PF 5% 50V		
CP701	QGZ1601K1-15S	DETACHABLE CONN			
D 601	SML-210LT/LM/-X	LED			
D 602	SML-210FT/JKL/W	LED	KD-S656R		
D 602	SML-210DT/KL/-X	LED	KD-S653R		
D 603	SML-210DT/KL/-X	LED	KD-S653R		
D 603	SML-210FT/JKL/W	LED	KD-S656R		
D 604	SML-210FT/JKL/W	LED	KD-S656R		
D 604	SML-210DT/KL/-X	LED	KD-S653R		
D 605	SML-210DT/KL/-X	LED	KD-S653R		
D 605	SML-210FT/JKL/W	LED	KD-S656R		
D 606	SML-210FT/JKL/W	LED	KD-S656R		
D 606	SML-210DT/KL/-X	LED	KD-S653R		
D 607	SML-210DT/KL/-X	LED	KD-S653R		
D 607	SML-210FT/JKL/W	LED	KD-S656R		
D 608	SML-210FT/JKL/W	LED	KD-S656R		
D 608	SML-210DT/KL/-X	LED	KD-S653R		
D 609	SML-210DT/KL/-X	LED	KD-S653R		
D 609	SML-210FT/JKL/W	LED	KD-S656R		
D 610	SML-210FT/JKL/W	LED	KD-S656R		
D 610	SML-210DT/KL/-X	LED	KD-S653R		
D 611	SML-210DT/KL/-X	LED	KD-S653R		
D 611	SML-210FT/JKL/W	LED	KD-S656R		
D 612	SML-210FT/JKL/W	LED	KD-S656R		
D 612	SML-210DT/KL/-X	LED	KD-S653R		
D 613	SML-210DT/KL/-X	LED	KD-S653R		
D 613	SML-210FT/JKL/W	LED	KD-S656R		
D 614	SML-210FT/JKL/W	LED	KD-S656R		
D 614	SML-210DT/KL/-X	LED	KD-S653R		
D 615	SML-210DT/KL/-X	LED	KD-S653R		
D 615	SML-210FT/JKL/W	LED	KD-S656R		
D 616	SML-210FT/JKL/W	LED	KD-S656R		
D 616	SML-210DT/KL/-X	LED	KD-S653R		
D 617	SML-210DT/KL/-X	LED	KD-S653R		
D 617	SML-210FT/JKL/W	LED	KD-S656R		
D 618	SML-210FT/JKL/W	LED	KD-S656R		
D 618	SML-210DT/KL/-X	LED	KD-S653R		
D 619	SML-210DT/KL/-X	LED	KD-S653R		
D 619	SML-210FT/JKL/W	LED	KD-S656R		
D 620	SML-210FT/JKL/W	LED	KD-S656R		
D 620	SML-210DT/KL/-X	LED	KD-S653R		
D 621	SML-210DT/KL/-X	LED	KD-S653R		
D 621	SML-210FT/JKL/W	LED	KD-S656R		
D 622	SML-210FT/JKL/W	LED	KD-S656R		
D 622	SML-210DT/KL/-X	LED	KD-S653R		
D 629	MA152WA-X	DIODE			
D 630	MA152WK-X	SI DIODE			
D 631	MA152WA-X	DIODE			
D 632	MA152WK-X	SI DIODE			
D 633	MA152WK-X	SI DIODE			
D 634	MA3043/H/-X	ZENER DIODE			
IC601	LC75823E	IC			
PL603	QLL0055-001	LAMP	KD-S653R		

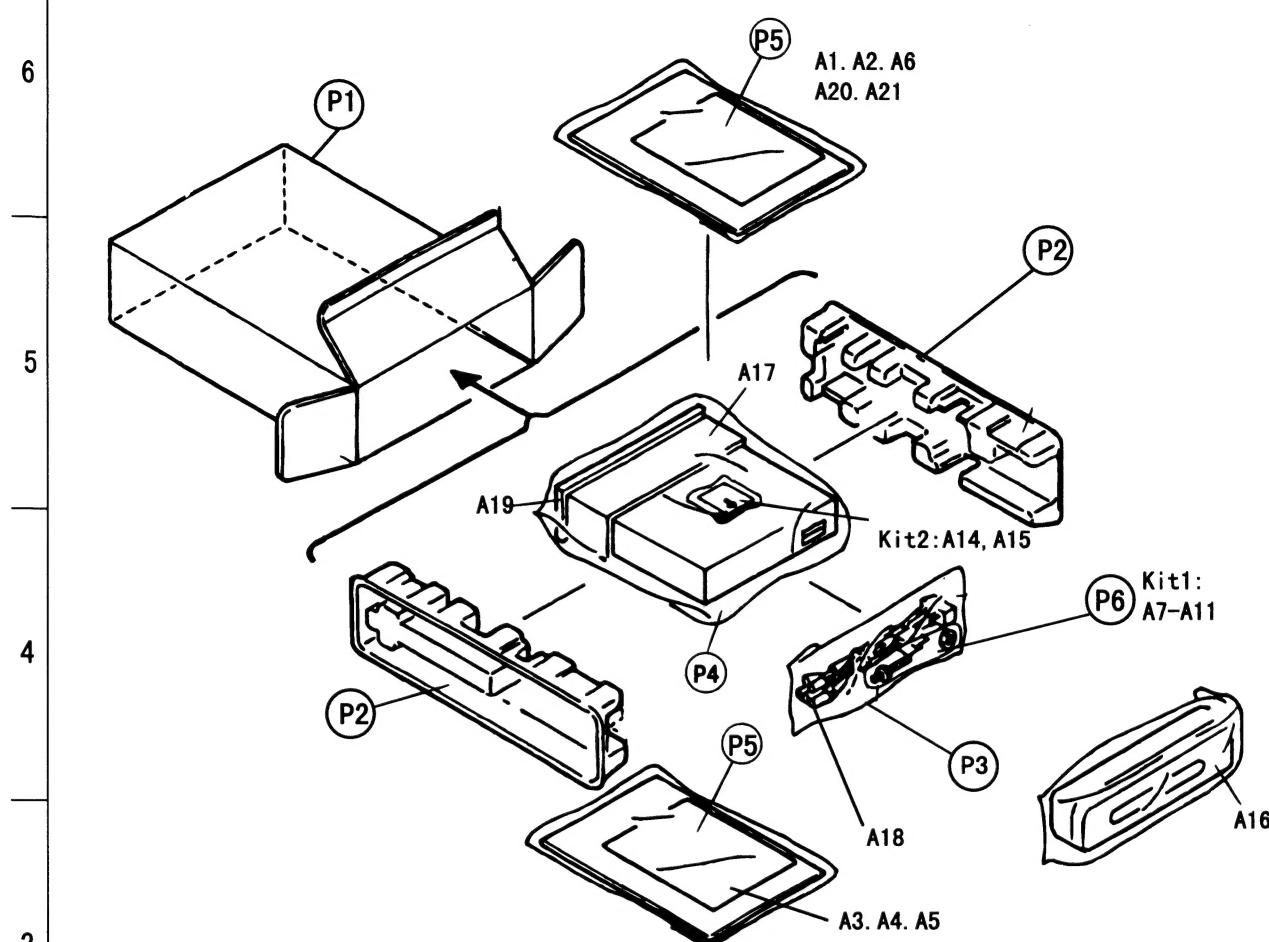
BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
PL603	QLL0033-001	LAMP	KD-S656R	
PL604	QLL0033-001	LAMP	KD-S656R	
PL604	QLL0055-001	LAMP	KD-S653R	
R 601	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 602	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 603	NRSA02J-182X	MG RESISTOR	1.8K 5% 1/10W	
R 604	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
R 605	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 606	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 607	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 608	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 609	NRSA02J-182X	MG RESISTOR	1.8K 5% 1/10W	
R 610	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
R 611	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 612	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 613	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
R 614	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
R 615	NRSA02J-182X	MG RESISTOR	1.8K 5% 1/10W	
R 616	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
R 617	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 618	NRSA02J-821X	MG RESISTOR	820 5% 1/10W	
R 619	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
R 620	NRS181J-821X	MG RESISTOR	820 5% 1/8W	
R 621	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 622	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 623	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 624	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 625	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 626	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 627	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
R 642	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 643	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 644	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
R 645	NRS181J-102X	MG RESISTOR	1.0K 5% 1/8W	
R 646	NRSA02J-221X	MG RESISTOR	220 5% 1/10W	
R 647	NRSA02J-394X	MG RESISTOR	390K 5% 1/10W	
R 648	NRSA02J-513X	MG RESISTOR	51K 5% 1/10W	
S 601	NSW0039-001X	TACT SWITCH		
S 602	NSW0039-001X	TACT SWITCH		
S 603	NSW0039-001X	TACT SWITCH		
S 604	NSW0039-001X	TACT SWITCH		
S 605	NSW0039-001X	TACT SWITCH		
S 606	NSW0039-001X	TACT SWITCH		
S 607	NSW0039-001X	TACT SWITCH		
S 608	NSW0039-001X	TACT SWITCH		
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S 618	NSW0039-001X	TACT SWITCH		

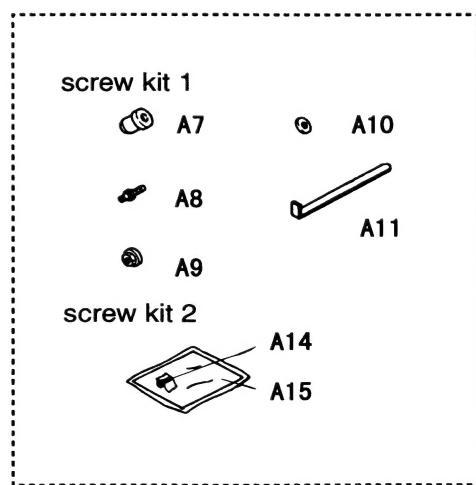
BLOCK NO. 02

## Packing Materials and Accessories Parts List

Block No.     
 Block No.



### ■ Accessories



A      B      C      D      E

## ■ Packing List

BLOCK NO. M3MMI

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	LV30748-001A	CARTON	KD-S656R	1		
	P 2	LV30749-001A	CARTON	KD-S653R	1		
	P 3	FSPH1014-001	PAPER CUSHION	L SIDE	2		
	P 4	QPA01003003	POLY BAG		1		
	P 5	VPE3005-066	POLY BAG	SET	1		
	P 6	QPA01703505P	POLY BAG		2		
		QPA00801205	POLY BAG		1		

## ■ Accessories List

BLOCK NO. M4MMI

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	LVT0148-001A	INST.BOOK		1		
	A 2	LVT0149-001A	INST.BOOK		1		
	A 3	LV30756-001A	INST MANUAL		1		
	A 4	LV30757-001A	INST MANUAL		1		
	A 5	LV30758-001A	INST MANUAL		1		
	A 6	BT-54008-1	W.CARD		1		
	A 7	VKZ4027-002	PLUG NUT		1		
	A 8	VKH4871-001	MOUNT BOLT		1		
	A 9	VKZ4328-001	LOCK NUT		1		
	A 10	WNS5000Z	WASHER		1		
	A 11	FSKL4010-002	HOOK		2		
	A 14	VKZ4777-001	MINI SCREW		1		
	A 15	FSYA4001-001	SHEET		1		
	A 16	FSJB3001-30A	HARD CASE		1		
	A 17	FSKM2004-001	MOUNTING SLEEVE		1		
	A 18	QAM0089-001	16P CORD ASSY		1		
	A 19	FSJD2019-002	TRIM PLATE		1		
	A 20	VND3050-002	IDENTITY CARD		1		
	A 21	VND3046-001	SERIAL TICKET		1		
	KIT1	KDGS717K-SCREW1	SCREW KIT 1	FOR W.CARD	1		
	KIT2	KDGS727J-SCREW2	SCREW KIT 2		1		